

Type I and II Ground Disturbing Categorical Exclusion Action Classification Form

STIP Project No.	B-5627
WBS Element	45582.1.1
Federal Project No.	N/A

A. Project Description:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 11 on NC 87 over Orton Pond Creek in Brunswick County, located south of Boiling Spring Lakes and north of Southport (see Figure 1). The replacement structure will be approximately 120 feet long providing a minimum 42-foot 10-inch clear roadway width. The bridge will include two 12-foot lanes and 8-foot shoulders. The bridge length is based on preliminary design information and is set by hydraulic requirements. Right of way acquisition and construction are scheduled for state fiscal years 2019 and 2020, respectively.

Project construction will extend approximately 630 feet from the north end of the new bridge and 650 feet from the south end of the new bridge. The approaches will provide two 12-foot lanes and 8-foot shoulders (4-foot paved). The roadway will be designed as a Minor Arterial with a 60-mile per hour design speed.

B. Description of Need and Purpose:

The purpose of the proposed project is to replace a functionally obsolete bridge. Bridge No. 11 was built in 1956. It is 103 feet long and 41.4 feet wide, with an approximately 28-foot clear roadway width. It is a five-span structure that consists of a precast prestressed concrete channel superstructure with asphalt wearing surface. The bridge is supported on timber pile and concrete cap bents with concrete backwalls at the ends.

NCDOT Bridge Management Unit records as of November 1, 2017 indicate Bridge No. 11 has a sufficiency rating of 51.69 out of a possible 100 for a new structure. Bridge No. 11 is considered functionally obsolete due to a deck geometry rating of 2 out of a possible 9 points.

Components of the concrete substructure and superstructure have experienced increased degree of deterioration that can no longer be addressed by maintenance activities. NC 87 at Bridge No. 11 has an Average Annual Daily Traffic (AADT) volume of 13,067 vehicles per day (vpd) for the year 2020 and future traffic of 17,900 AADT for the year 2040. The substandard deck width is becoming increasingly unacceptable and replacement of the bridge will result in safer traffic operations.

C. Categorical Exclusion Action Classification:

TYPE I A

D. Proposed Improvements:

28. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings, if the actions meet the constraints in 23 CFR 771.117(e)(1-6).

E. Special Project Information:

Costs:

The estimated 2019 costs are:

Utilities- \$486,000.00

Construction- \$2,600,000

Total- \$3,086,000.00

Anticipated Permit or Consultation Requirements:

The US Army Corps of Engineers (USACE) Section 404 Nationwide Permits (NWP) 23 and 33 will likely be applicable. The USACE holds the final discretion as to which permit will be required to authorize project construction. If a Section 404 permit is required, then a Section 401 Water Quality Certification (WQC) from the NC Department of Water Resources (NCDWR) will be needed.

Design Exceptions:

There are no anticipated design exceptions for this project.

Bridge Demolition:

Bridge No. 11 should be possible to remove with no resulting debris in the water based on standard demolition practices.

Alternatives Discussion:

No Build: The no build alternative would result in eventually closing the bridge as its condition continues to deteriorate.

Rehabilitation: Rehabilitation would only provide a temporary solution for this functionally obsolete bridge. The bridge was constructed in 1956 and is functionally obsolete, which would constitute effectively replacing the bridge.

On-Site Detour (Preferred): A temporary on-site detour was chosen as the preferred alternative to replace Bridge No. 11. During construction of the new bridge in place, the roadway will be open to traffic using a two-lane temporary detour bridge just south of the existing bridge.

Off-Site Detour: An off-site detour was deemed not to be feasible due to its length. The closest available detour is approximately 22 miles, with 3 miles on SR 1521 being a dirt/gravel unpaved road. The length of the detour would delay emergency response times. The Emergency Services Director for Brunswick noted that the project would delay responding to calls using NC 87. Additionally, this detour would be problematic in the event of a hurricane since NC 87 is designated as a NCDOT hurricane evacuation route.

Agency Comments:

The Brunswick County School System noted that the project would have a high impact on school transportation. There is a middle school and high school within proximity to the bridge. Currently, 17 Brunswick County buses make 68 trips across the bridge per day. It was also noted that carpool traffic for both schools would be affected during peak periods 5:30 to 9:30 am and 2:00 to 6:30 pm.

In response to the Start of Study notification sent via email on January 14, 2016, the Cape Fear Council of Governments provided the following comments for Bridge No. 11:

- The bridge is located in a large Significant Natural Heritage Area rated Exceptional by the NC Natural Heritage Program.
- The bridge is located in a wetland rated by NC CREWS as Exceptional Significance.
- There are red cockaded woodpecker colonies in the area. Emily Wells at USFWS is familiar with the situation in the Boiling Spring Lakes area.
- The replacement of Bridge 11 will be a significant disturbance to either/both summertime vacation traffic on NC 87 or/and to school traffic to the High School and Middle School just north of the bridge. Close coordination with the City of Boiling Spring Lakes, Brunswick Co Schools, and Sunny Point Military Ocean Terminal is recommended.
- The detour route should follow Fifty Lakes Drive, a local route in the City of Boiling Spring Lakes.
- The detour route crosses the US Army railroad serving Sunny Point twice, at Fifty Lakes Dr and NC 133.
- The Brunswick Co CTP forecasts that NC 87 will be 310% overcapacity by 2035 (V/C 3.09). A project forecast is critical to determine the necessary cross section of the bridge.
- Bike or pedestrian facilities are not currently planned for the route, but that may change as the Cape Fear Regional Bike Plan funded by NCDOT and commencing soon, is developed.
- NCDOT currently has ±150' of R/W and the location of the bridge within the right-of-way should be designed to accommodate future widening of the roadway to a 4-lane divided facility without replacing the bridge.

Public Involvement:

A landowner notification letter was mailed on February 16, 2016, to property owners within the project study area. The letter informed citizens of the initiation of planning studies for the project.

F. Project Impact Criteria Checklists:

<u>Type I & II - Ground Disturbing Actions</u>				
<u>FHWA APPROVAL ACTIVITIES THRESHOLD CRITERIA</u>				
If any of questions 1-7 are marked "yes" then the CE will require FHWA approval.			Yes	No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6	Does the project require an Individual Section 4(f) approval?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If any of questions 8 through 31 are marked "yes" then additional information will be required for those questions in Section G.				
<u>Other Considerations</u>			Yes	No
8	Does the project result in a finding of "may affect not likely to adversely affect" for listed species, or designated critical habitat under Section 7 of the Endangered Species Act (ESA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	Is the project located in anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11	Does the project impact waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

<u>Other Considerations (continued)</u>		Yes	No
14	Does the project include a Section 106 of the NHPA effects determination other than a no effect, including archaeological remains?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15	Does the project involve hazardous materials and/or landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	Does the project require a U.S. Coast Guard (USCG) permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21	Does the project impact federal lands (e.g. U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Does the project involve any changes in access control?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Will maintenance of traffic cause substantial disruption?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	Is the project inconsistent with the STIP or the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP) (where applicable)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28	Does the project include a <i>de minimis</i> or programmatic Section 4(f)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29	Is the project considered a Type I under the NCDOT's Noise Policy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31	Are there other issues that arose during the project development process that affected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F

Response to Question 1:

Northern Long Eared Bat (NLEB) - The US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the US Army Corps of Engineers (USACE), and NCDOT for the northern long-eared

bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is “May Affect, Likely to Adversely Affect”. The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Brunswick County, where TIP B-5627 is located.

Response to Question 8:

Wood Stork – Suitable habitat for the wood stork (*Mycteria americana*) is present in the study area in the form of freshwater swamps. No wood storks were observed in the study area on March 8, 2016. On May 16, 2019 a query of NCNHP records using the online NC Natural Heritage Data Explorer indicated no wood stork occurrences within 1-mile of the study area. A biological conclusion of “May Affect – Not Likely to Adversely Affect” has been determined.

Red-cockaded Woodpecker - On February 22, 2016, a query of NCNHP records using the online North Carolina Natural Heritage Data Explorer indicated three red-cockaded woodpecker (*Picoides borealis*) occurrences within 1-mile of the study area. All three occurrences had a status of “Historical” with the most recent observation in January 1986. According to the Natural Resources Technical Report, the biological conclusion for the red-cockaded woodpecker is undetermined. An RCW survey was conducted in 2016 because foraging habitat was located within the project study area requiring a half-mile survey for nesting habitat. One active cluster and 20 RCW cavity trees were located within one half-mile of the project study area. RCW demographic monitoring and a foraging habitat analysis may be needed for this project if any pine trees greater than 30 years old will be cut down during construction of the bridge replacement. A small area was not surveyed because the landowner denied the consultant access to their property. Based on these findings, the RCW survey report completed in November 2016 indicated that the biological conclusion is still undetermined.

Waccamaw silverside - The USFWS has listed Waccamaw silverside (*Menidia extensa*) for Brunswick County since the NRTR was completed. The project will have No Effect on this fish because it is outside of the basin where the species occurs according to the USFWS IPaC system.

Response to Question 14:

Bridge No. 11 is eligible for listing on the National Register of Historic Places because it is technologically significant as one of the oldest extant applications of prestressed concrete in North Carolina. This bridge represents early efforts of the state bridge unit to make use of the economical and strong material first introduced for bridges in the US during the early 1950s. It is eligible for the National Register of Historic Places under Criterion C for engineering.

It was determined during a February 2, 2016 effects meeting with the North Carolina Historic Preservation Office (NC-HPO) that the Preferred Alternative would result in an adverse effect to the historic property because the historic bridge will be removed.

Pursuant to 36 CFR §800.6(b)(1)(iv), a Memorandum of Agreement (MOA) will be developed in consultation with the consulting parties; NCDOT, NC-HPO and the USACE (lead federal agency). Prior to removal of Brunswick County Bridge Number 11, NCDOT shall record the existing condition of the bridge and its surroundings in accordance with an approved Historic

Structures and Landscape Recordation Plan. The MOA and supporting documentation shall be filed with the Advisory Council of Historic Preservation at the conclusion of the consultation process.

Response to Question 16:

The project will decrease the base floodplain elevation of Orton Pond Creek.

H. Project Commitments

**Brunswick County
Bridge No. 11 over Orton Pond Creek on NC 87
WBS No. 45582.1.1.
TIP No. B-5627**

Hydraulic Unit – FEMA Coordination

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP) to determine status of the project with regard to the applicability of NCDOT's Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

Environmental Analysis Unit – Section 106 Consultation

Pursuant to 36 CFR §800.6(b)(1)(iv), a Memorandum of Agreement (MOA) will be developed in consultation with the consulting parties; NCDOT, NC-HPO and the USACE (lead federal agency). Prior to removal of Brunswick County Bridge Number 11, NCDOT shall record the existing condition of the bridge and its surroundings in accordance with an approved Historic Structures and Landscape Recordation Plan. The MOA and supporting documentation shall be filed with the Advisory Council of Historic Preservation at the conclusion of the consultation process.

Environmental Analysis Unit – Red-cockaded Woodpecker (RCW)

RCW demographic monitoring and a foraging habitat analysis will be conducted for this project if any pine trees greater than 30 years old will be cut down during construction of the bridge replacement.

Division 3 Construction - Community Coordination

NCDOT will contact Brunswick County Schools at (910) 253-2880 at least one month prior to construction to coordinate construction activities with school transportation schedules.

Brunswick County Emergency Services will be contacted at (910) 253-2569 at least one month prior to construction to make the necessary temporary reassignments to primary response units.

NCDOT will contact the Military Ocean Terminal Sunny Point (MOTSU) United States Army Base Commander at (910) 457-7475 at least one month prior to construction to coordinate construction activities and military activities at the base.

I. Categorical Exclusion Approval

STIP Project No.	<u>B-5627</u>
WBS Element	<u>45582.1.1</u>
Federal Project No.	<u>N/A</u>

Prepared By:

8/15/2019	<small>DocuSigned by:</small> <i>Michael Stafford</i>
<u>Date</u>	<u>Michael Stafford, Transportation Planner, CDM Smith</u>

Prepared For: North Carolina Department of Transportation

Reviewed By:

8/22/2019	<small>DocuSigned by:</small> <i>Phillip Harris</i>
<u>Date</u>	<u>Phillip S. Harris III, PE, CPM- Environmental Analysis Unit Head North Carolina Department of Transportation</u>

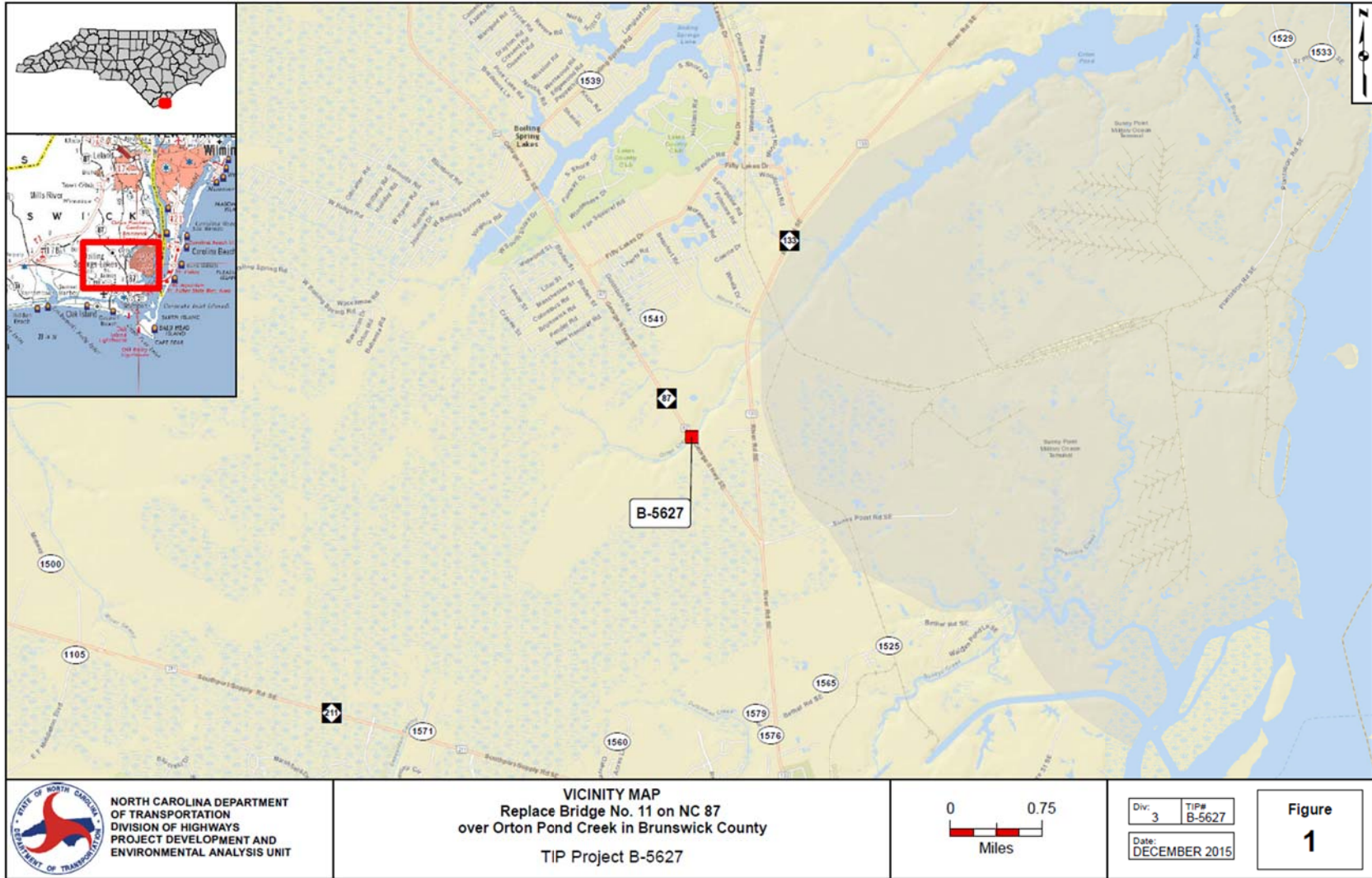
Approved If all of the threshold questions (1 through 7) of Section F are answered "no," NCDOT approves this Categorical Exclusion.

Certified If any of the threshold questions (1 through 7) of Section F are answered "yes," NCDOT certifies this Categorical Exclusion.

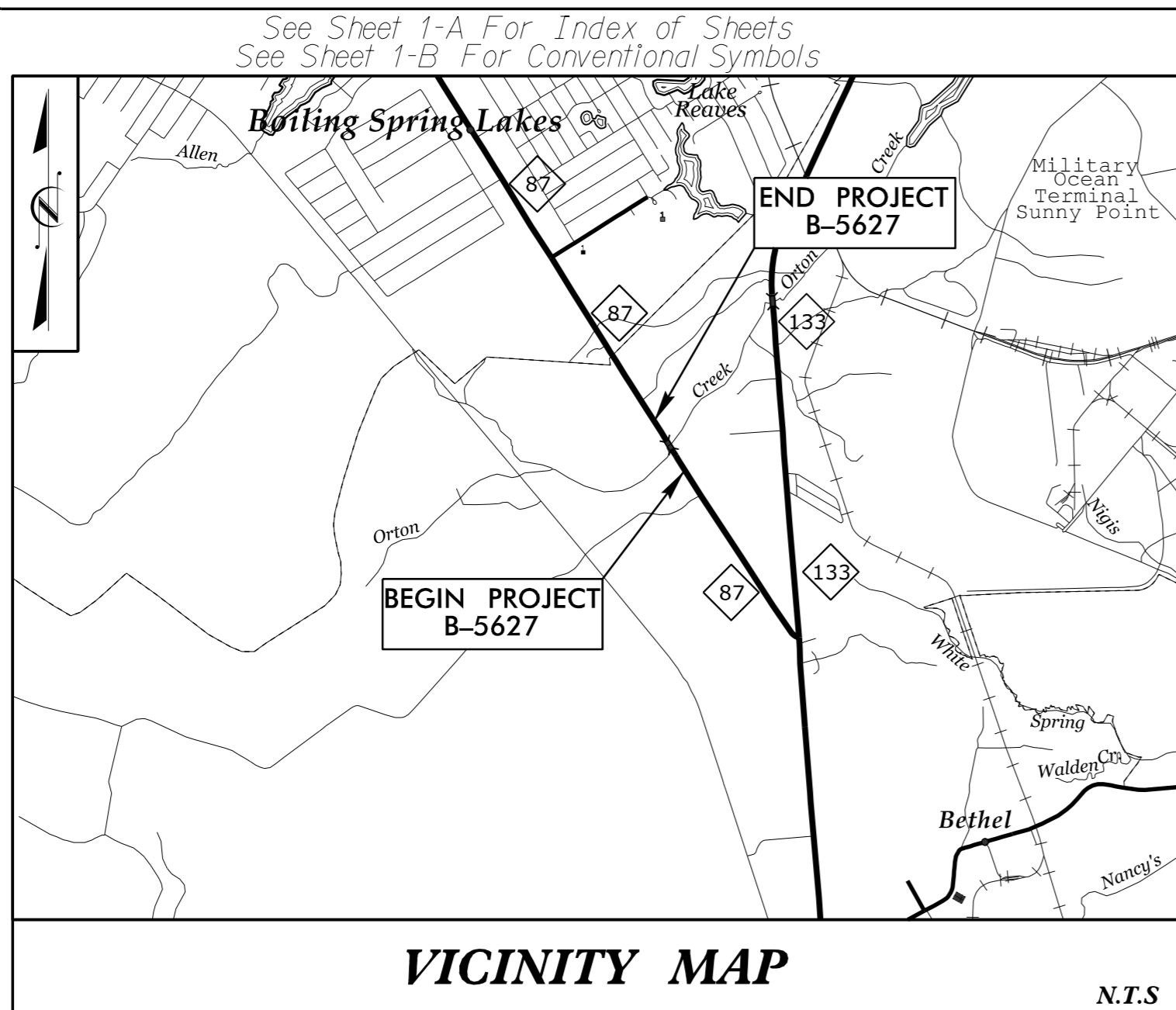
8/23/2019	<small>DocuSigned by:</small> <i>Kevin Fischer</i>
<u>Date</u>	<u>Kevin Fischer, PE, Structures Management Unit North Carolina Department of Transportation</u>

FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

<u>Date</u>	<u>Not Applicable John F. Sullivan, III, PE, Division Administrator Federal Highway Administration</u>
-------------	--



09/08/19



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BRUNSWICK COUNTY

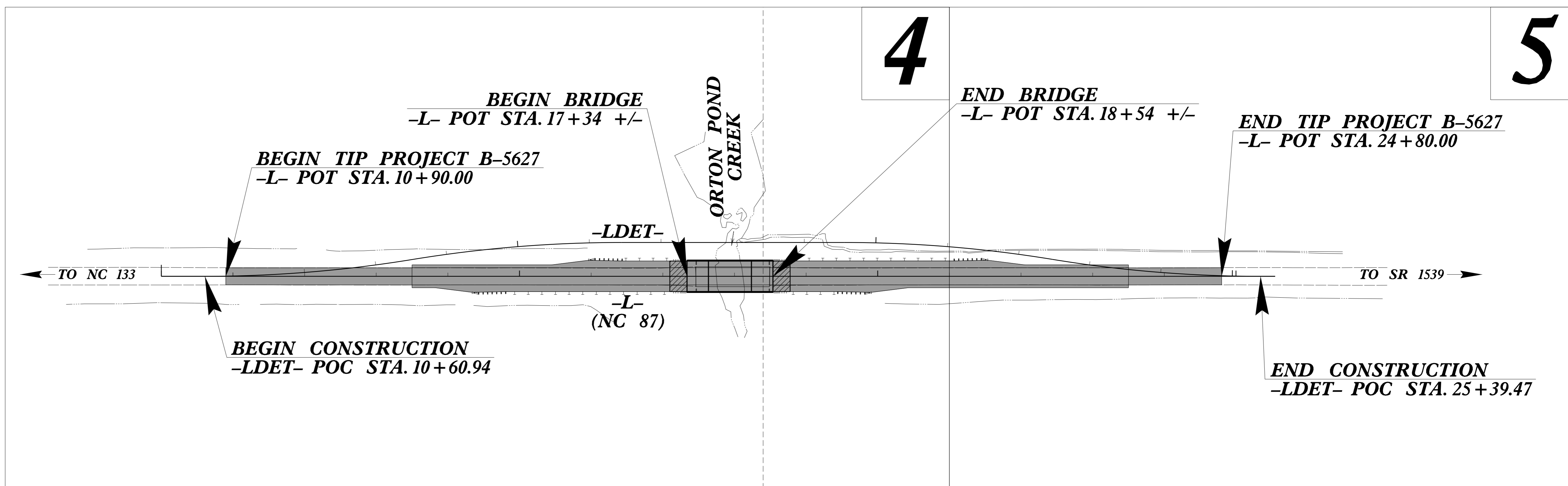
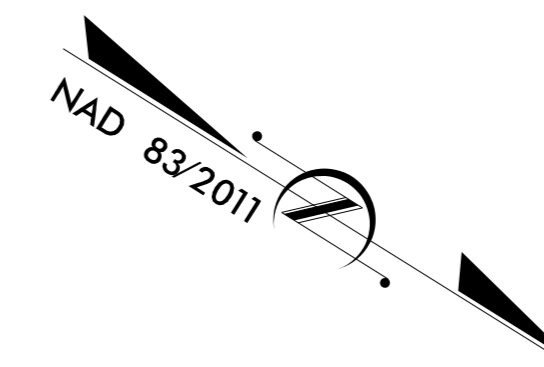
**LOCATION: REPLACE BRIDGE NO. 11 OVER ORTON POND CREEK
ON NC 87 (GEORGE II HIGHWAY)**

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5627	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45582.1.1	N/A	PE	

25% APPROVED PLANS

**INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION**

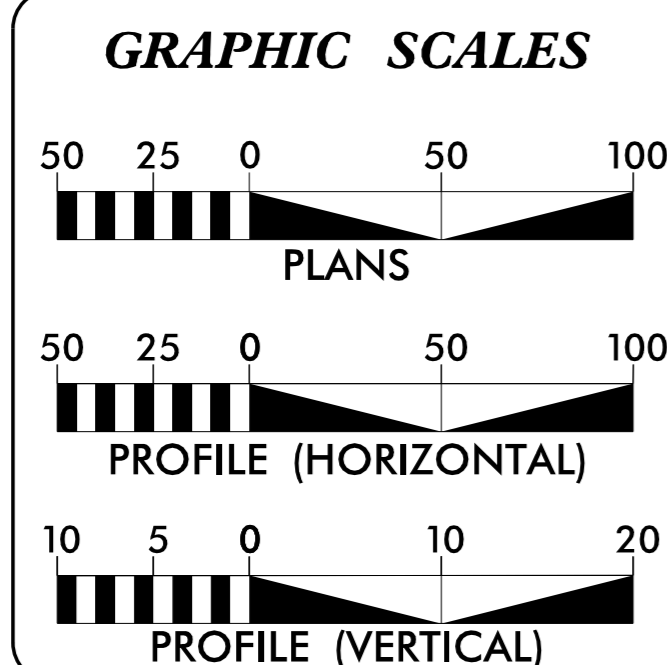


THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

CLEARING AND GRUBBING ON THIS PROJECT SHALL BE TO THE LIMITS ESTABLISHED BY METHOD II.

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

CONTRACT:



DESIGN DATA

ADT 2020 =	13,067
ADT 2040 =	17,900
K =	9 %
D =	60 %
T =	5 % *
V =	60 MPH
* TTST =	2% DUAL 3%
FUNC CLASS =	MINOR ARTERIAL
REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5627 =	0.240 MILES
LENGTH STRUCTURE TIP PROJECT B-5627 =	0.023 MILES
TOTAL LENGTH TIP PROJECT B-5627 =	0.263 MILES

Prepared in the Office of:
CDM Smith
CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC COA No. F-1255

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 13, 2019

LETTING DATE:
JULY 21, 2020

DAVID Z. KEISER, P.E.
PROJECT ENGINEER

HEATHER HARKENRIDER, P.E.
PROJECT DESIGN ENGINEER

TIERRE R. PETERSON, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

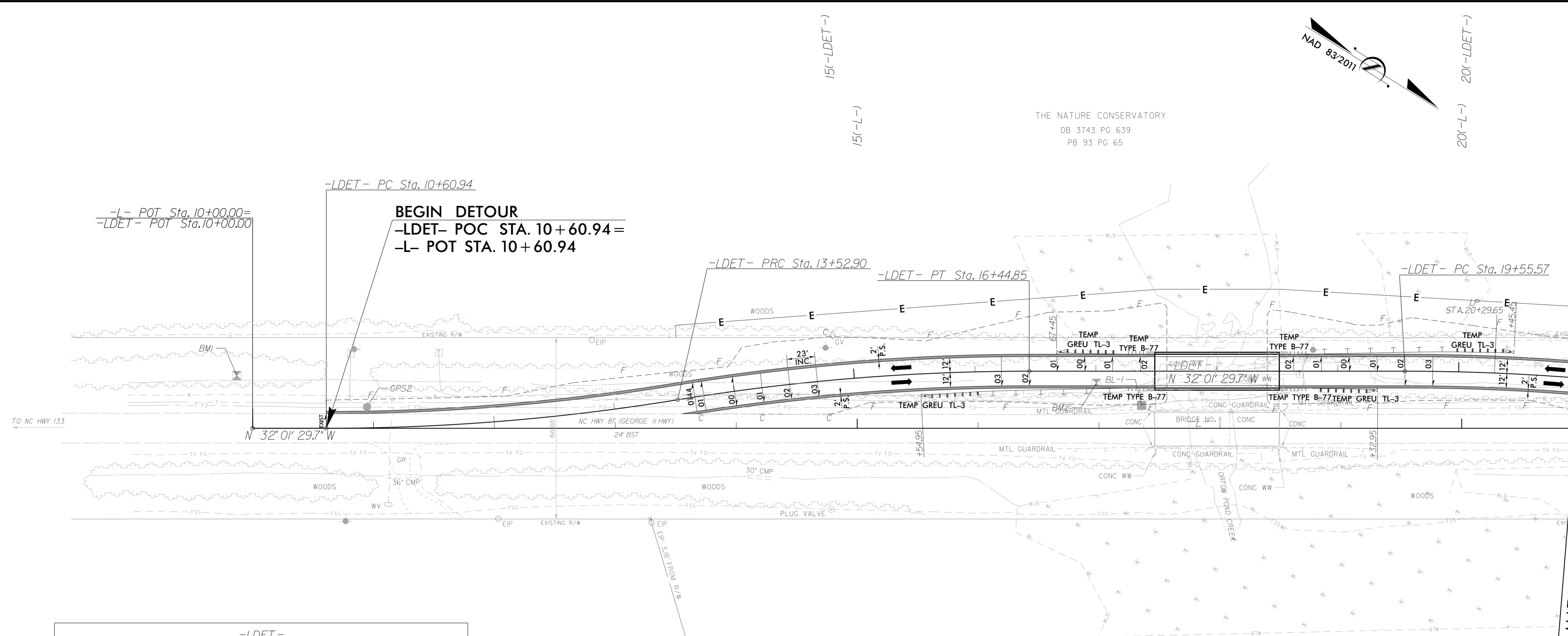
SIGNATURE: _____ P.E.



-SYSTEME-
\\R00dwy\Proj\B5627_rdy_tsh.dgn
USER: PERSIANIK

PROJECT REFERENCE NO. B-5627		SHEET NO. 2B-1	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
CDM Smith Inc. 3400 Glenwood Avenue Suite 400 Raleigh, NC 27612-3228 NC COA No. F-1255		SUNGATE DESIGN GROUP, P.A. 916 JONES FARMWAY ROAD HAZLEHURST, NORTH CAROLINA 27626 NC COA No. C-2882	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

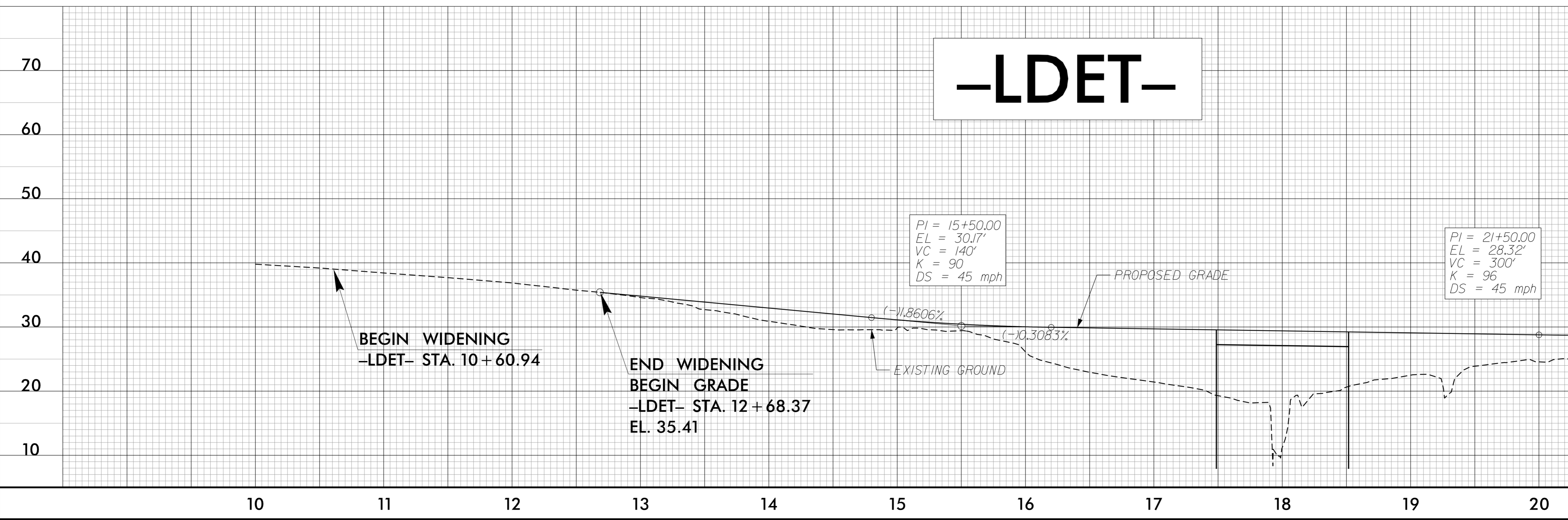
REVISIONS



-LDET-		
PI Sta 12+07.24	PI Sta 14+99.19	PI Sta 21+01.86
$\Delta = 9'17'' 35.4'' (LT)$	$\Delta = 9'17'' 35.4'' (RT)$	$\Delta = 9'17'' 35.4'' (RT)$
$D = 3'10'' 59.2''$	$D = 3'10'' 59.2''$	$D = 3'10'' 59.2''$
$L = 291.95'$	$L = 291.95'$	$L = 291.95'$
$T = 146.30'$	$T = 146.30'$	$T = 146.30'$
$R = 1,800.00'$	$R = 1,800.00'$	$R = 1,800.00'$
$e = 0.03$	$e = 0.03$	$e = 0.03$
$RO = 69'$	$RO = 69'$	$RO = 69'$
$DS = 45 \text{ mph}$	$DS = 45 \text{ mph}$	$DS = 45 \text{ mph}$

MATCHLINE -LDET- STA. 21+00.00
SEE SHEET 2B-2

FOR -L- SEE SHEET NO. 4

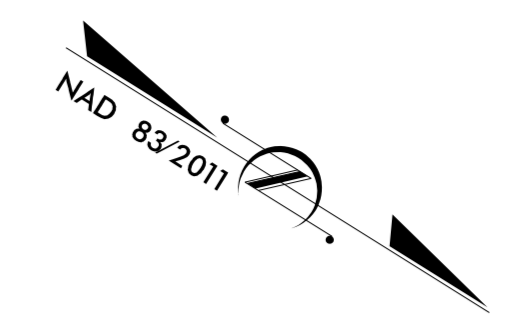


BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	=	CFS 70
DESIGN FREQUENCY	=	YRS
DESIGN HW ELEVATION	=	FT
BASE DISCHARGE	=	CFS
BASE FREQUENCY	=	YRS
BASE HW ELEVATION	=	FT
OVERTOPPING DISCHARGE	=	CFS
OVERTOPPING FREQUENCY	=	YRS
OVERTOPPING ELEVATION	=	FT
DATE OF SURVEY	=	FT
W.S. ELEVATION AT DATE OF SURVEY	=	FT 40

-SYSTEM: B6627_rdw_sht_2B-1.dgn
USER: JARREN

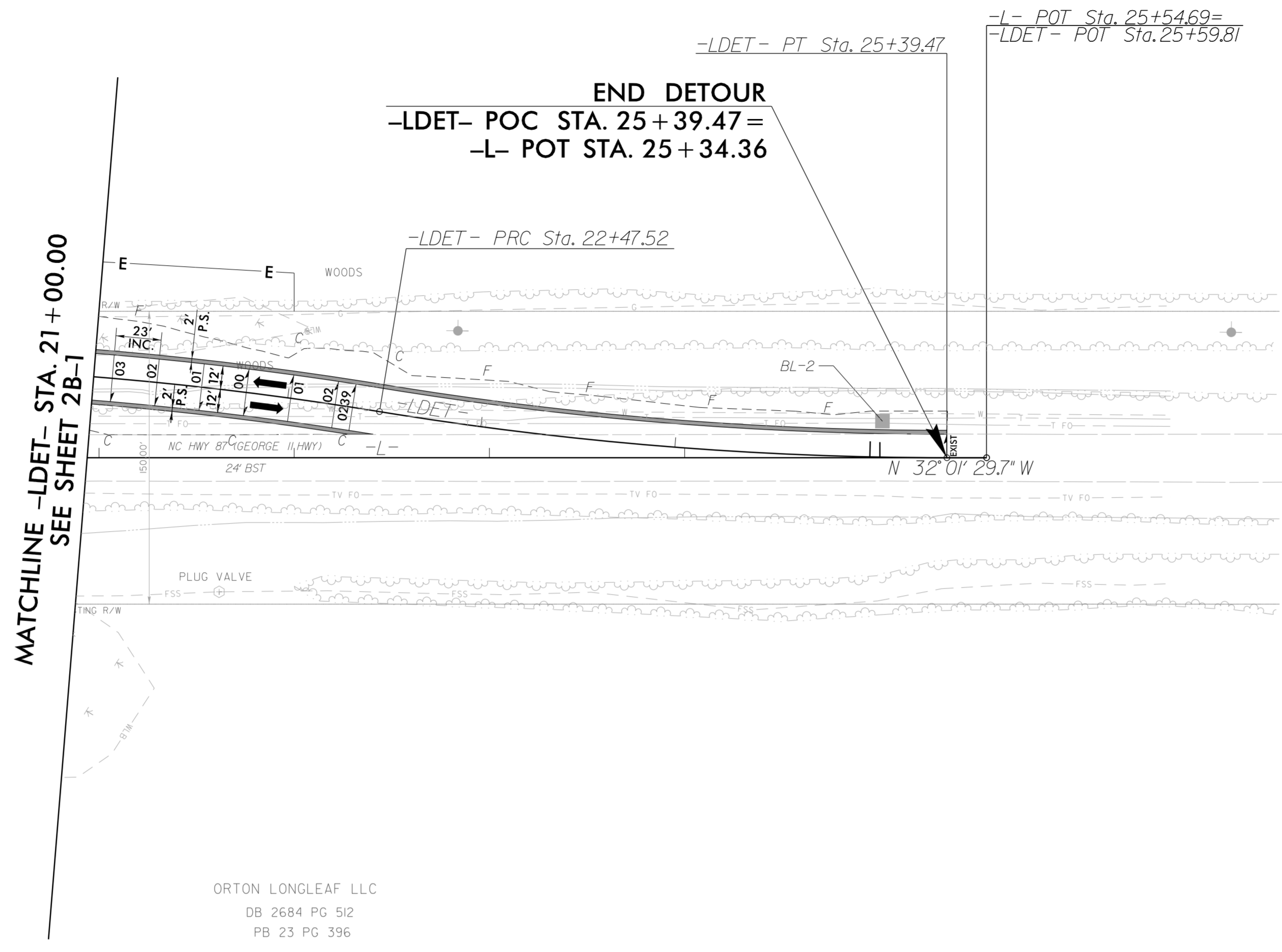
8/17/99

PROJECT REFERENCE NO. <i>B-5627</i>		SHEET NO. <i>2B-2</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION </div>			
CDM Smith <small>CDM Smith Inc. 2400 Glenwood Avenue Suite 400 Raleigh, NC 27612-3228 NC COA No. P-1255</small>		<small>SUNGATE DESIGN GROUP, P.A. 110 JONES FARMWAY ROAD HALETH, NORTH CAROLINA 27639 NC COA No. C-2892</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



THE NATURE CONSERVATORY
DB 3743 PG 639
PB 93 PG 65

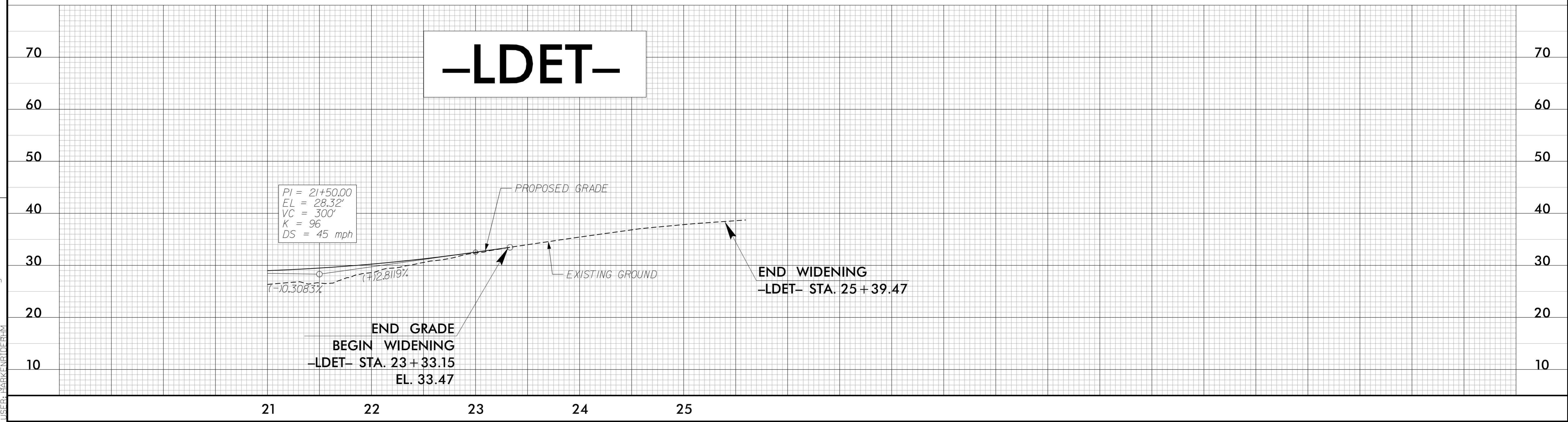
25(-L-) 25(-LDET-)



ORTON LONGLEAF LLC
DB 2684 PG 512
PB 23 PG 396

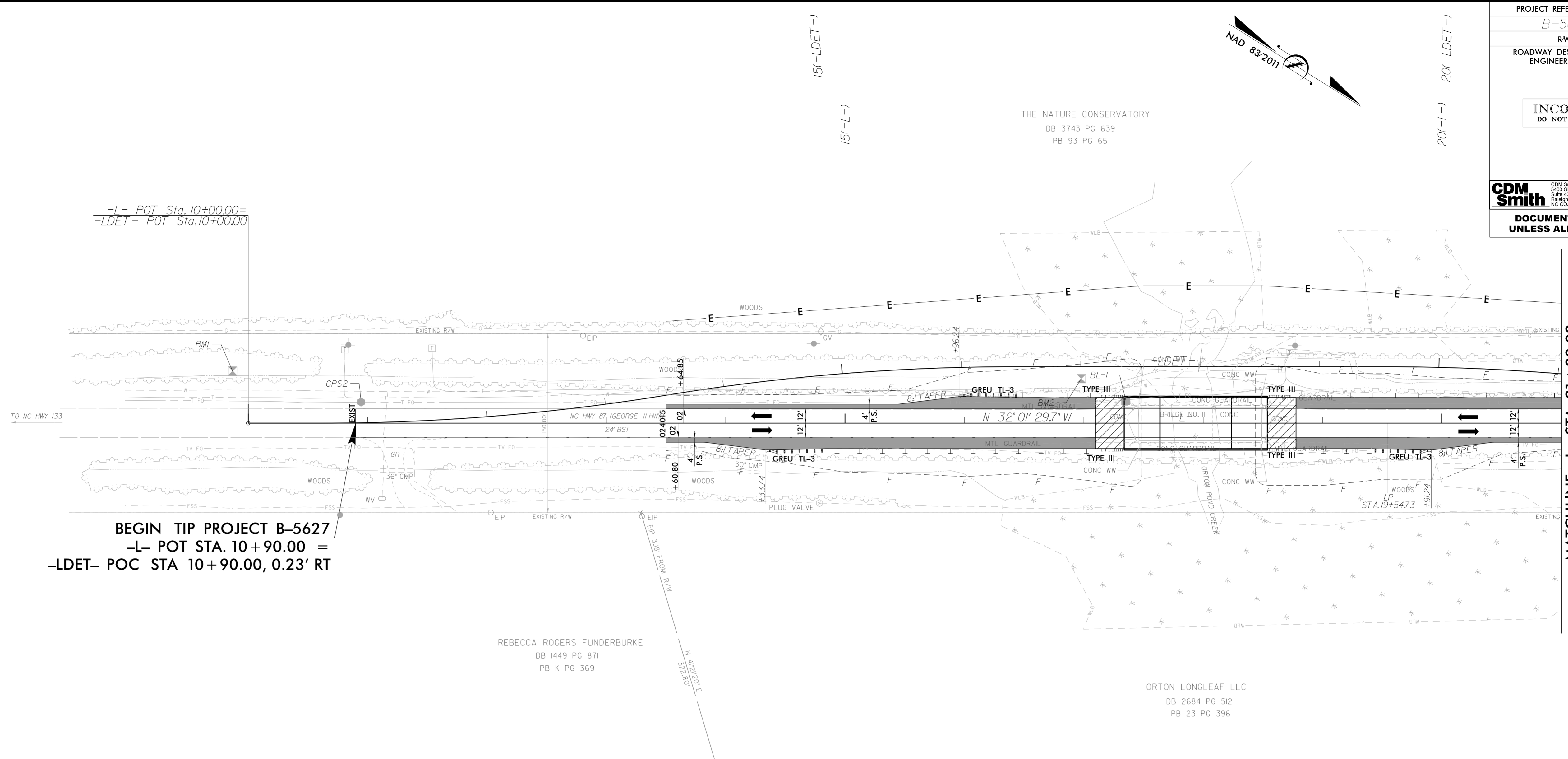
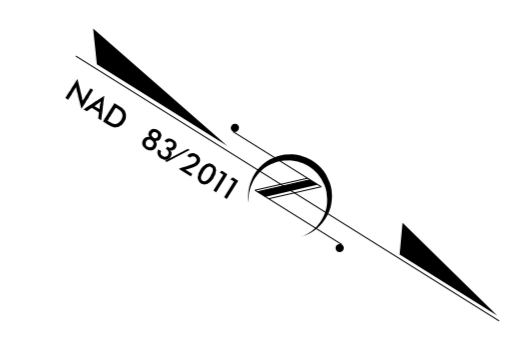
REVISIONS

FOR -L- SEE SHEET NO. 5



-SYSTEM: B6627_rdw_sst-2B-2.dgn
USER: CHARENCE

PROJECT REFERENCE NO. <i>B-5627</i>		SHEET NO. 4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION </div>			
CDM Smith Inc. <small>3400 Greenwood Avenue Suite 400 Raleigh, NC 27612-3228 NC COA No. P-1255</small>		SUNGATE DESIGN GROUP, P.A. <small>915 JONES FARMWAY ROAD HAZLEHURST, NORTH CAROLINA 27626 NC COA No. C-28820</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



-L- POT Sta. 10+00.00 =
 -LDET- POT Sta. 10+00.00

BEGIN TIP PROJECT B-5627
 -L- POT STA. 10+90.00 =
 -LDET- POC STA 10+90.00, 0.23' RT

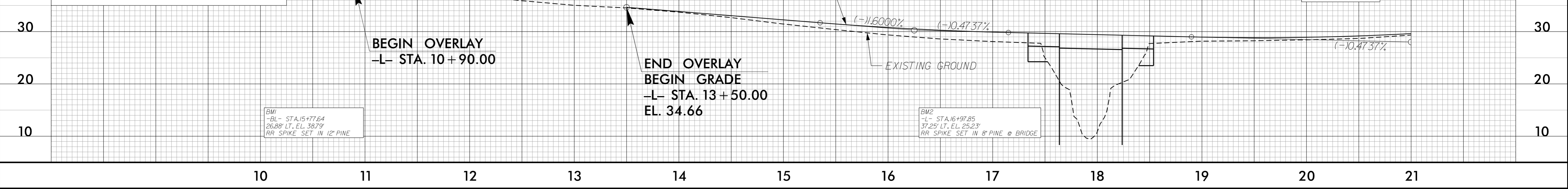
**MATCHLINE -L- STA. 21+00.00
 SEE SHEET 5**

REVISIONS

BRIDGE APPROACH SLAB
 FOR -LDET- SEE SHEET NO. 2B-1

BRIDGE HYDRAULIC DATA

70	DESIGN DISCHARGE =	CFS
	DESIGN FREQUENCY =	YRS
	DESIGN HW ELEVATION =	FT
	BASE DISCHARGE =	CFS
60	BASE FREQUENCY =	YRS
	BASE HW ELEVATION =	FT
	OVERTOPPING DISCHARGE =	CFS
	OVERTOPPING FREQUENCY =	YRS
50	OVERTOPPING ELEVATION =	FT
	DATE OF SURVEY =	FT
40	W.S. ELEVATION AT DATE OF SURVEY =	FT

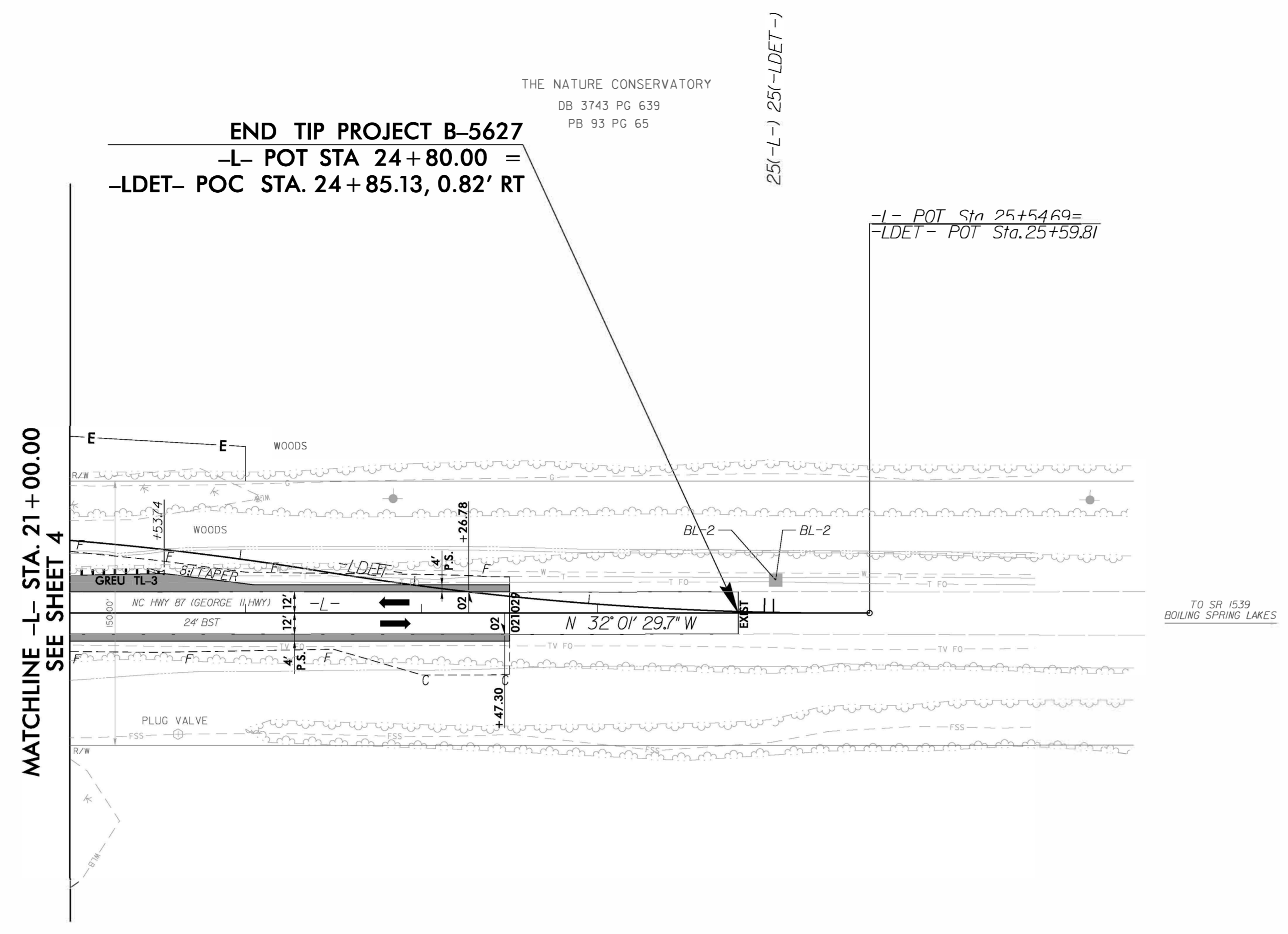
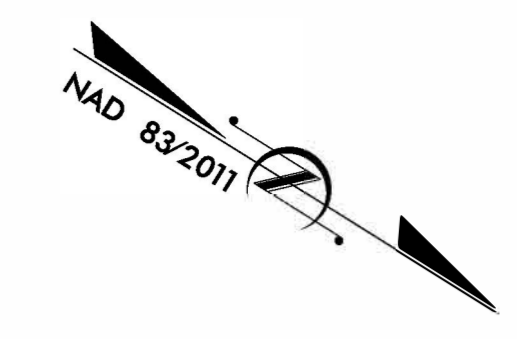


BM1
 -L- STA. 15+77.64
 26.88' LT. EL. 38.73'
 RR SPIKE SET IN 12" PINE

BM2
 -L- STA. 16+97.85
 37.25' LT. EL. 25.23'
 RR SPIKE SET IN 8" PINE @ BRIDGE

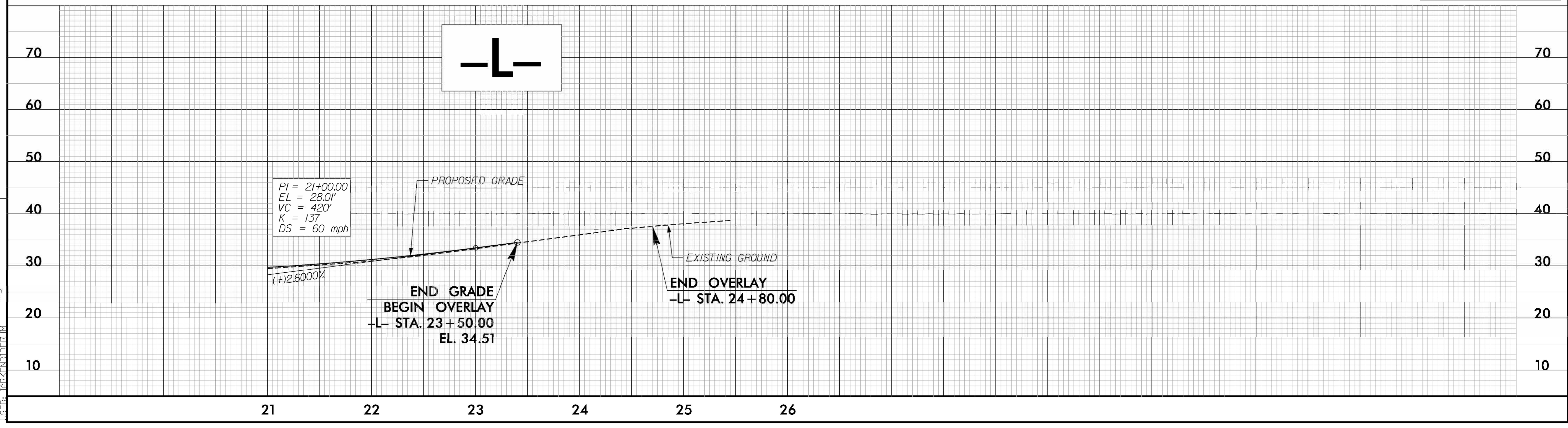
-SYSTEM: B6627_r.dwg, sst-04.dgn
 USER: CHARRIN

PROJECT REFERENCE NO. <i>B-5627</i>		SHEET NO. 5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION </div>			
CDM Smith <small>CDM Smith Inc. 5400 Greenwood Avenue Raleigh, NC 27612-3228 NC COA No. F-1255</small>		SUNGATE DESIGN GROUP, P.A. <small>910 JONES FARM ROAD HICKORY NORTH CAROLINA 28601 NC COA No. C-0880</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



ORTON LONGLEAF LLC
DB 2684 PG 512
PB 23 PG 396

FOR -LDET- SEE SHEET NO. 28-2



REVISIONS

-SYSTEM B-5627_rdw.dgn - 05.dgn

8/17/99

15-12-0027



NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.



PROJECT INFORMATION

Project No: **B-5627** County: **Brunswick**
 WBS No: **45582.1.1** Document: **SMC**
 F.A. No: **na** Funding: State Federal

Federal Permit Required? Yes No Permit Type: **NWP**

Project Description:

The project calls for the replacement of Bridge No. 11 on NC 87 (George II Road) over Orton Pond Creek in Brunswick County. The archaeological Area of Potential Effects (APE) for the project is defined as a 1,600-foot (487.68 m) long corridor running 800 feet (243.84 m) northwest and 800 feet southeast along NC 87 from the center of Bridge No. 11. The corridor is approximately 350 feet (106.68 m) wide extending 175 feet (53.34 m) on either side of the road from its present center.

SUMMARY OF CULTURAL RESOURCES REVIEW

Brief description of review activities, results of review, and conclusions:

Bridge No. 11 is located just north of Southport in the southeast corner of Brunswick County, North Carolina. The project area is plotted at the northern edge of the Southport USGS 7.5' topographic quadrangle (Figure 1).

A map review and site file search was conducted at the Office of State Archaeology (OSA) on January 19, 2016. No previously recorded archaeological sites have been identified within the APE or within a mile of the bridge. According to the North Carolina State Historic Preservation Office online data base (HPOWEB 2016), the bridge is listed on the 2005 Historic Bridge Inventory as a determined eligible resource. However, there are no contributing archaeological resources associated with the bridge architecture. Topographic maps, USDA soil survey maps, aerial photographs (NC One Map), historic maps (North Carolina maps website), and the Google Street View application were examined for information on environmental and cultural variables that may have contributed to prehistoric or historic settlement within the project limits and to assess the level of ground disturbance.

Bridge 11 and NC 87 cross Orton Pond Creek from the northwest to the southeast. The waterway drains to the east and is a tributary to the Cape Fear River. The APE is situated within the floodplain and along low rises at either end (Figure 2). It appears that the low rises might be reclaimed swamp. Ground disturbance is minimal, but the road is raised on an earthen embankment within the floodplain and timber harvesting has been carried out on the neighboring properties.

According to the USDA soil survey report, the floodplain is made up of Muckalee loam (Mk), while the rises consist of Leon fine sand (Lo) (see Figure 2). These are nearly level and poorly drained soils. It is very unlikely that these soils will yield significant archaeological sites due to wetness.

OSA's site files show few reviews or intense investigation within the vicinity, which have resulted in no archaeological sites being reported.

15-12-0027

During a review of the historic maps, the earliest map in which an approximate location of the project area could be determined was on Jeremy Gilmer and Benjamin Lewis' 1864 *Map of parts of Brunswick and New Hanover Counties showing the approaches to Wilmington* (Figure 3). On this map, the current section of Orton Pond Creek is referred to as Moore Creek. A road leading from White Spring Branch and crossing over Moore Creek is in the vicinity of NC 87 and the current bridge. It is difficult to determine their precise location due to the nature of this map. Also, no historic structures are shown near the crossing. Nearly 45 years later, Charles Smith's 1910 *Map of Brunswick County* shows a similar but clearer picture of the road and crossing (Figure 4). However, this map plots no structures. By the 1930s, the modern layout of NC 87 is complete. This is seen in 1937 soil map for the county (Figure 5). The bridge appears to be at or very near its current location. No structures are within or near the project area. Also, the name Moore Creek now refers to a branch of Orton Pond Creek found to the north.

Brief Explanation of why the available information provides a reliable basis for reasonably predicting that there are no unidentified historic properties in the APE:

The defined archaeological APE for the proposed replacement of Bridge No. 11 in Brunswick County is unlikely to impact intact and significant archaeological deposits. This is due to poor and wet soils found within the project limits, which are unsuitable for early settlement activities. In addition, no historic structures are identified in the area according to the map review. As long as impacts to the subsurface occur within the defined APE, no further archaeological work is recommended for the proposed replacement of Bridge No. 11. If work should affect subsurface areas beyond the defined APE, further archaeological consultation might be necessary.

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos Correspondence
 Photocopy of County Survey Notes Other: **images of historic maps**

FINDING BY NCDOT ARCHAEOLOGIST

NO ARCHAEOLOGY SURVEY REQUIRED



C. Damon Jones
NCDOT ARCHAEOLOGIST

1/27/16

Date

15-12-0027



HISTORIC ARCHITECTURE AND LANDSCAPES
****SURVEY REQUIRED FORM****

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	B-5627	County:	Brunswick
WBS No.:	45582.1.1	Document Type:	SMC
Fed. Aid No:	N/A	Funding:	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	NWP
Project Description: Replace Bridge No. 11 on NC 87 over Orton Pond Creek.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on December 31, 2015. Based on this review, Bridge No. 11 is DETERMINED ELIGIBLE for National Register listing. A survey of the project area and FOAE will be required.

SUPPORT DOCUMENTATION

Map(s) Previous Survey Info. Photos Correspondence Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- ****SURVEY REQUIRED****

Kate Hubert

12/31/2015

NCDOT Architectural Historian

Date

Anticipated Fieldwork Completion Date: July 2016

Effects Form

Project Tracking No. (Internal Use)

15-12-0027



**HISTORIC ARCHITECTURE AND LANDSCAPES
ASSESSMENT OF EFFECTS FORM**

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	B-5627	County:	Brunswick
WBS No.:	45582.1.1	Document Type:	SMC
Fed. Aid No:	N/A	Funding:	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	NWP
Project Description: Replace Bridge No. 11 on NC 87 over Orton Pond Creek.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:
Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on December 31, 2015. Bridge No. 11, a prestressed concrete channel beam bridge built 1956, is DETERMINED ELIGIBLE for National Register listing.

ASSESSMENT OF EFFECTS

Property Name:	Bridge No. 11	Status:	Determined Eligible
Survey Site No.:	N/A	PIN:	
Effects <input type="checkbox"/> No Effect <input type="checkbox"/> No Adverse Effect <input checked="" type="checkbox"/> Adverse Effect			
Explanation of Effects Determination:			
List of Environmental Commitments: Photodocumentation of structure before removal.			

FHWA Intends to use the State Historic Preservation Office's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):

SUPPORT DOCUMENTATION

Map(s) Previous Survey Info. Photos Correspondence Design Plans

FINDING BY NCDOT AND STATE HISTORIC PRESERVATION OFFICE

Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS

Kate Hubbard 2-2-2016
NCDOT Architectural Historian Date

Renee Hedrick-Early 2.2.2
State Historic Preservation Office Representative Date

SHAVER.BRAD.E.12
76601756

Digitally signed by SHAVER.BRAD.E.1276601756
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,
ou=USA, cn=SHAVER.BRAD.E.1276601756
Date: 2019.01.07 09:52:31 -05'00'

Federal Agency Representative Date



Preserving America's Heritage

February 21, 2019

Mr. Brad Shaver
USACE Wilmington District
69 Darlington Ave
Wilmington, NC 28403

Ref: *Proposed Replacement of Bridge Number 11 on NC 87 over Orton Pond Creek
Brunswick County, North Carolina
ACHPConnect Log Number:13551*

Dear Mr. Shaver:

The Advisory Council on Historic Preservation (ACHP) has received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and it is determined that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the North Carolina State Historic Preservation Officer (SHPO), and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA, and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with the notification of adverse effect. If you have any questions or require further assistance, please contact Anthony Guy Lopez at (202) 517-0220 or by email at alopez@achp.gov.

Sincerely,

LaShavio Johnson
Historic Preservation Technician
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

401 F Street NW, Suite 308 • Washington, DC 20001-2637
Phone: 202-517-0200 • Fax: 202-517-6381 • achp@achp.gov • www.achp.gov