



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

BEVERLY PERDUE  
GOVERNOR

EUGENE CONTI  
SECRETARY

January 21, 2009

MEMORANDUM TO: Mr. J. Wally Bowman , PE  
Division Five Engineer

FROM: Philip S. Harris, III, P.E., Unit Head  
Natural Environment Unit  
Project Development and Environmental Analysis Branch

SUBJECT: Moore County, Replace Bridge No. 45 on SR 1600 over  
Fishing Creek; T.I.P. Number B-3921; State Project  
8.2410901

*E. F. Fush*

Attached is the Riparian Buffer Authorization for the above referenced project. All environmental permits have been received for the construction of this project.

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

PSH/gyb

Attachment

Cc: W/attachment  
Mr. Randy Garris, P.E. State Contract Officer  
Mr. Chris Murray, Division Environmental Officer

Cc: W/o attachment (see website for attachments)  
Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Jay Bennett, P.E., Roadway Design  
Dr. David Chang, P.E., Hydraulics  
Mr. Art McMillan, P.E., Highway Design  
Mr. Tom Koch, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. John F. Sullivan, FHWA  
Mr. Ron Hancock, P.E., State Roadway Construction Engineer  
Mr. Mike Robinson, P.E., State Bridge Construction Engineer  
Mr. Eric Midkiff, P.E., PDEA Central Region Unit Head

# **PROJECT COMMITMENTS**

**Warren County  
Replacement of Bridge 45 on SR 1600  
Over Fishing Creek  
State Project 8.2410901  
WBS No. 33355.1.1  
TIP No. B-3921**

## **Commitments Developed Through Project Development and Design**

### **Roadside Environmental Unit**

Sedimentation and erosion control measures shall adhere to Design Standards in Sensitive Watersheds.

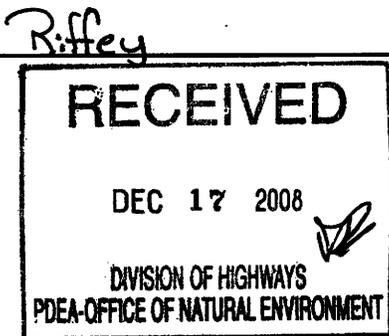
### **Division 5 Construction**

The Division should contact the Transportation Director for Warren County Schools at least 30 days prior to closing the road to coordinate the possible need for bus turnarounds.

The Division should contact Warren County Emergency Services at least 30 days prior to closing the road so temporary reassignments to primary response routes can be made.

## **Commitments Developed Through 404/401 Permitting**

No special commitments were made during the project's permit process.



December 9, 2008  
Warren County  
DWQ Project No. 20081757  
Bridge 45 on SR 1600  
TIP No. B-3921

**APPROVAL of TAR-PAMLICO BUFFER AUTHORIZATION with ADDITIONAL CONDITIONS**

Dr. Gregory J. Thorpe, Ph.D., Environmental Management Director  
NCDOT Project Development and Environmental Analysis  
1598 Mail Service Center  
Raleigh, NC 27699-1598

Dear Dr. Thorpe:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing Bridge 45 in Warren County:

**Tar-Pamlico Riparian Buffer Impacts**

Site	Zone 1 Impact (sq ft)	minus Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	minus Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
1	5300	0	5300	N/A	2194	0	2194	N/A
<b>Totals</b>	<b>5300</b>	<b>0</b>	<b>5300</b>	<b>0</b>	<b>2194</b>	<b>0</b>	<b>2194</b>	<b>0</b>

\* n/a = Allowable impact, no mitigation required

**Total Buffer Impact for Project: 7,494 square feet.**

The project shall be constructed in accordance with your application dated received November 26, 2008. This approval is valid for the Tar-Pamlico Riparian Buffer Rules (15A NCAC 2B.0259). In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations.

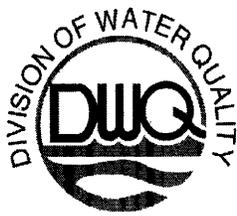
This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the DWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed below.

**Conditions of Approval:**

1. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species.



2. Strict adherence to the most recent version of NCDOT's Best Management Practices For Bridge Demolition and Removal approved by the US Army Corps of Engineers is a condition of the 401 Water Quality Certification.
3. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices*.
4. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For the purpose of this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular DOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated, with native woody species before the next growing season following completion of construction.
5. Pursuant to NCAC15A 2B.0259(6), sediment and erosion control devices shall not be placed in Zone 1 of any Tar-Pamlico Buffer without prior approval by the NCDWQ. At this time, the NCDWQ has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.
6. All stormwater runoff shall be directed as sheetflow through stream buffers at nonerosive velocities, unless otherwise approved by this certification.
7. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
8. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.
9. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions.
10. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage.
11. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.
12. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
13. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream.
14. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.
15. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.



16. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
17. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If DWQ determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, DWQ may reevaluate and modify this certification.
18. A copy of this Water Quality Certification shall be maintained on site at the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.
19. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.
20. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
21. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
22. Upon completion of the project (including any impacts at associated borrow or waste site), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed.
23. Native riparian vegetation (i.e., trees and shrubs native to your geographic region) must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.
24. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.
25. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:
  - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
  - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
  - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.



Michael F. Easley, Governor  
William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director  
Division of Water Quality

- d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

26. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.

If you do not accept any of the conditions of this certification, you may ask for an adjudicatory hearing. You must act within 60 days of the date that you receive this letter. To ask for a hearing, send a written petition that conforms to Chapter 150B of the North Carolina General Statutes to the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699. This certification and its conditions are final and binding unless you ask for a hearing. This letter completes the review of the Division of Water Quality under Section 401 of the Clean Water Act. If you have any questions, please contact Rob Ridings at (919) 733-9817.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Sullins', written over a horizontal line.

Coleen Sullins,  
Director

Attachment (Certificate of Completion form)

cc: Chris Murray, Division 5 Environmental Officer  
Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office  
Travis Wilson, NC Wildlife Resources Commission  
Deanna Riffey, NCDOT NEU  
File Copy



DWQ Project No.: \_\_\_\_\_ County: \_\_\_\_\_

Applicant: \_\_\_\_\_

Project Name: \_\_\_\_\_

Date of Issuance of 401 Water Quality Certification: \_\_\_\_\_

**Certificate of Completion**

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to DWQ by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

**Applicant's Certification**

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Agent's Certification**

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Engineer's Certification**

\_\_\_\_\_ Partial \_\_\_\_\_ Final

I, \_\_\_\_\_, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project, for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature \_\_\_\_\_ Registration No. \_\_\_\_\_

Date \_\_\_\_\_

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3921	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33355.1.1	BRZ-1600(7)	PE	
33355.2.2	BRZ-1600(7)	RW & UTIL.	



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

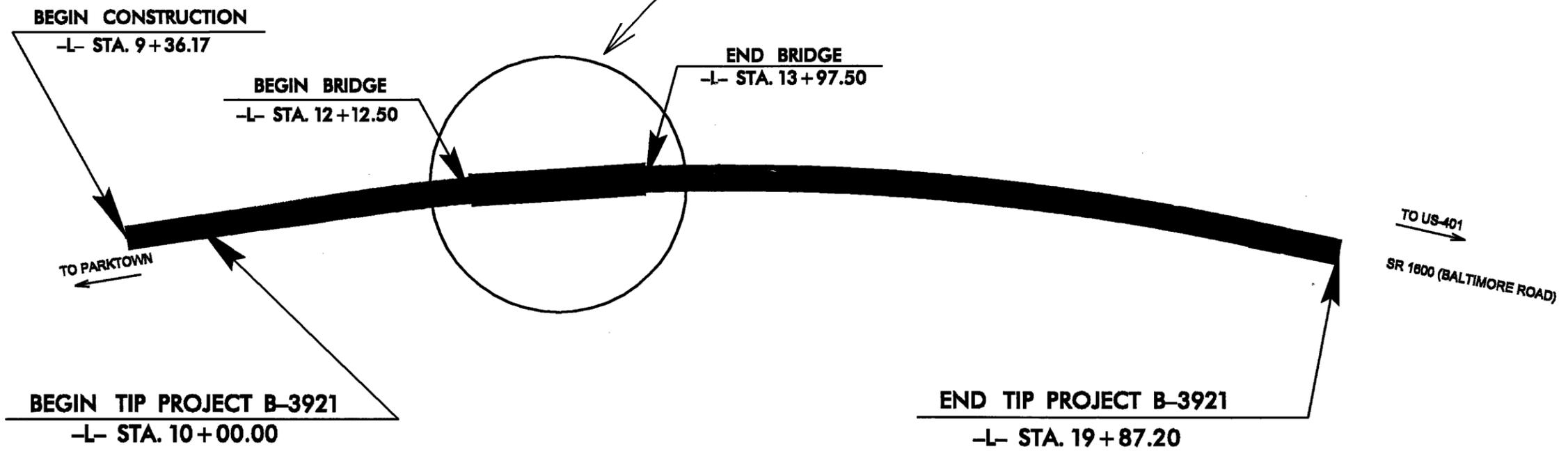
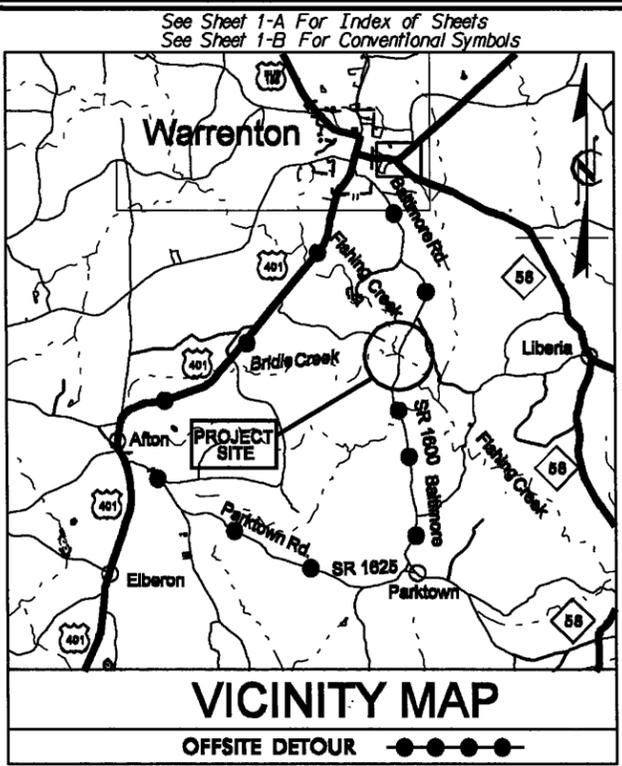
**WARREN COUNTY**

**LOCATION: BRIDGE NO. 45 OVER FISHING CREEK AND APPROACHES ON SR 1600 (BALTIMORE ROAD)**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE**

BUFFER PERMIT DRAWINGS

Buffer Drawing Sheet 1 of 1

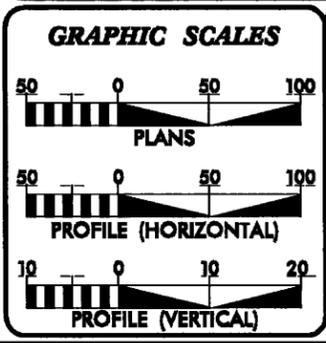


\* VERTICAL ALIGNMENT DESIGN EXCEPTION REQUIRED  
THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

**CONTRACT: TIP PROJECT: B-3921**



**DESIGN DATA**

ADT 2009 =	950
ADT 2030 =	1450
DHV =	14 %
D =	60 %
T =	3 % **
V =	60 MPH *
** TTST 1 % & DUAL 2 %	
FUNC CLASS = RURAL LOCAL	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-3921 =	0.152 MI
LENGTH STRUCTURES TIP PROJECT B-3921 =	0.035 MI
TOTAL LENGTH TIP PROJECT B-3921 =	0.187 MI

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: **GLENN W. MUMFORD, PE**  
JUNE 20, 2008  
PROJECT ENGINEER

LETTING DATE: **SUSAN C. LANCASTER, PE**  
JUNE 16, 2009  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

\_\_\_\_\_  
P.E.

**ROADWAY DESIGN ENGINEER**

\_\_\_\_\_  
P.E.

\_\_\_\_\_  
P.E.

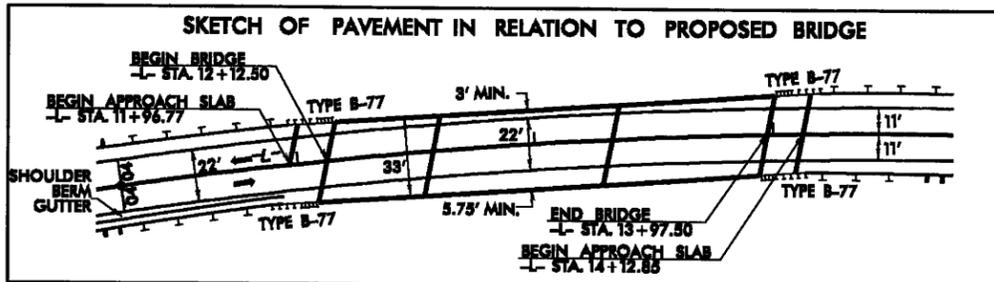
STATE HIGHWAY DESIGN ENGINEER

**DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA**

\_\_\_\_\_  
P.E.

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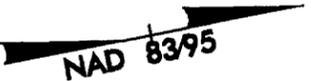
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**VERTICAL ALIGNMENT DESIGN EXCEPTION REQUIRED. ALL DESIGN ELEMENTS MEET OR EXCEED A 50 MPH DESIGN SPEED.**

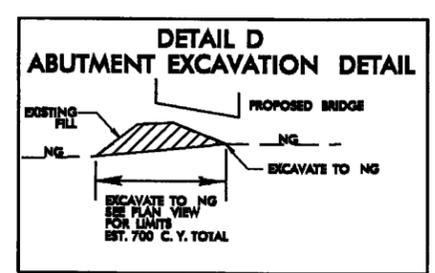
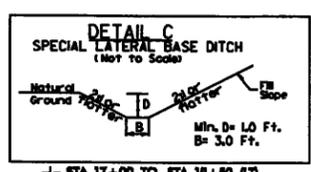
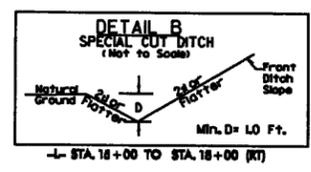
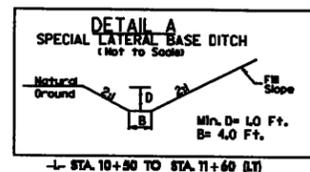
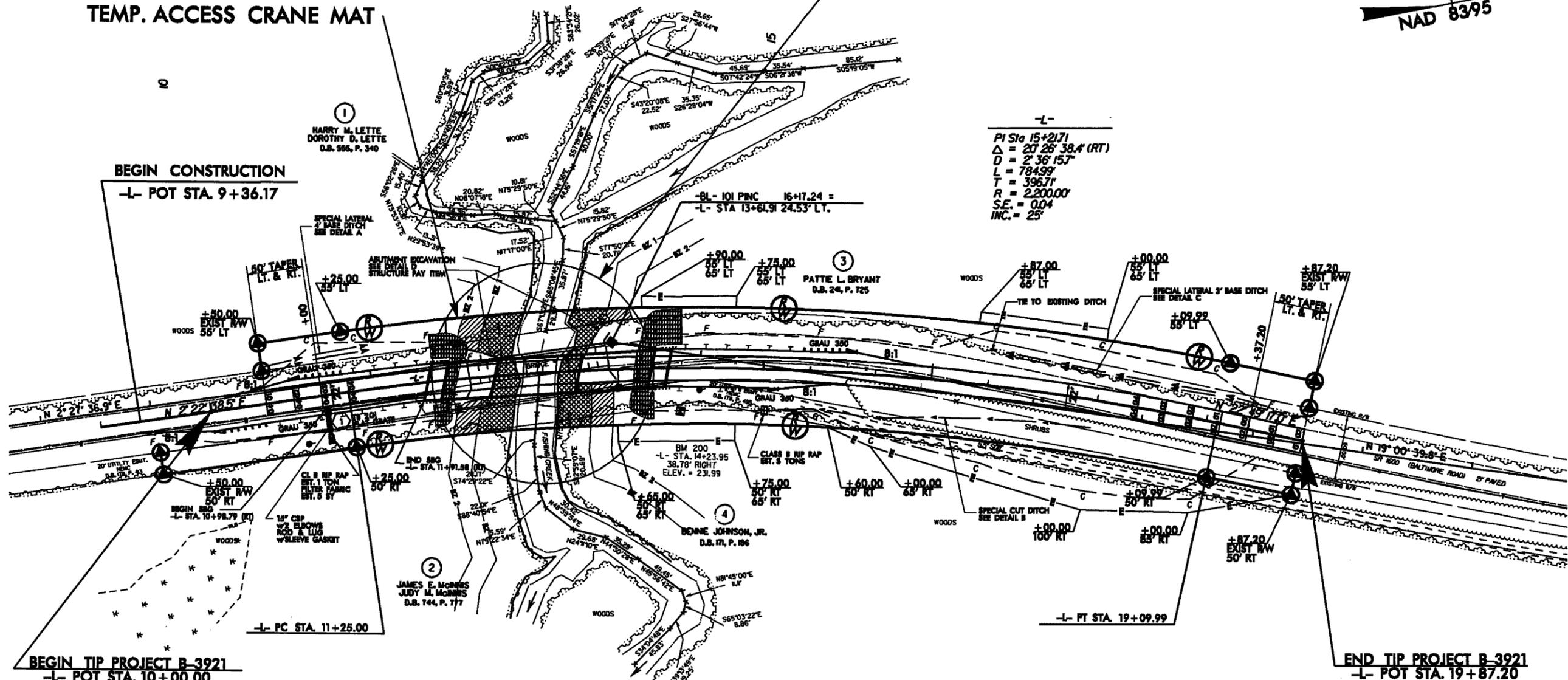
PROJECT REFERENCE NO. <b>B-3921</b>	SHEET NO. <b>4</b>
RDW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

Buffer Drawing Sheet 2 of 7



**TEMP. ACCESS CRANE MAT**

**SEE ENLARGEMENT**

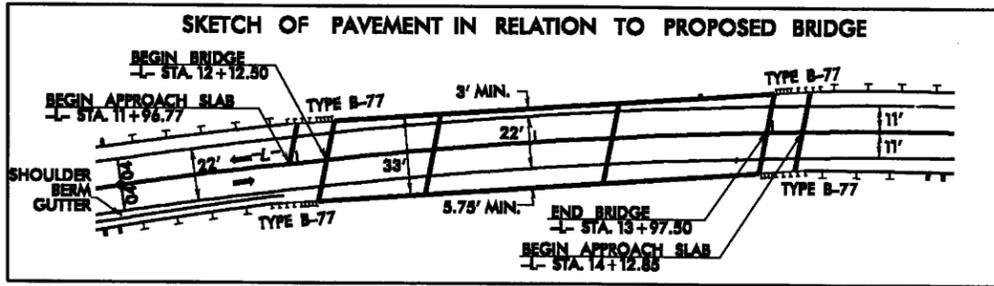


- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2



FOR -L- PROFILE SEE SHEET 5

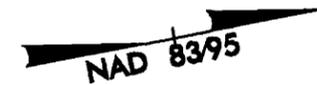
8/17/99



VERTICAL ALIGNMENT DESIGN EXCEPTION REQUIRED.  
ALL DESIGN ELEMENTS MEET OR EXCEED A  
50 MPH DESIGN SPEED.

PROJECT REFERENCE NO. B-3921	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Buffer Drawing  
Sheet 3 of 1

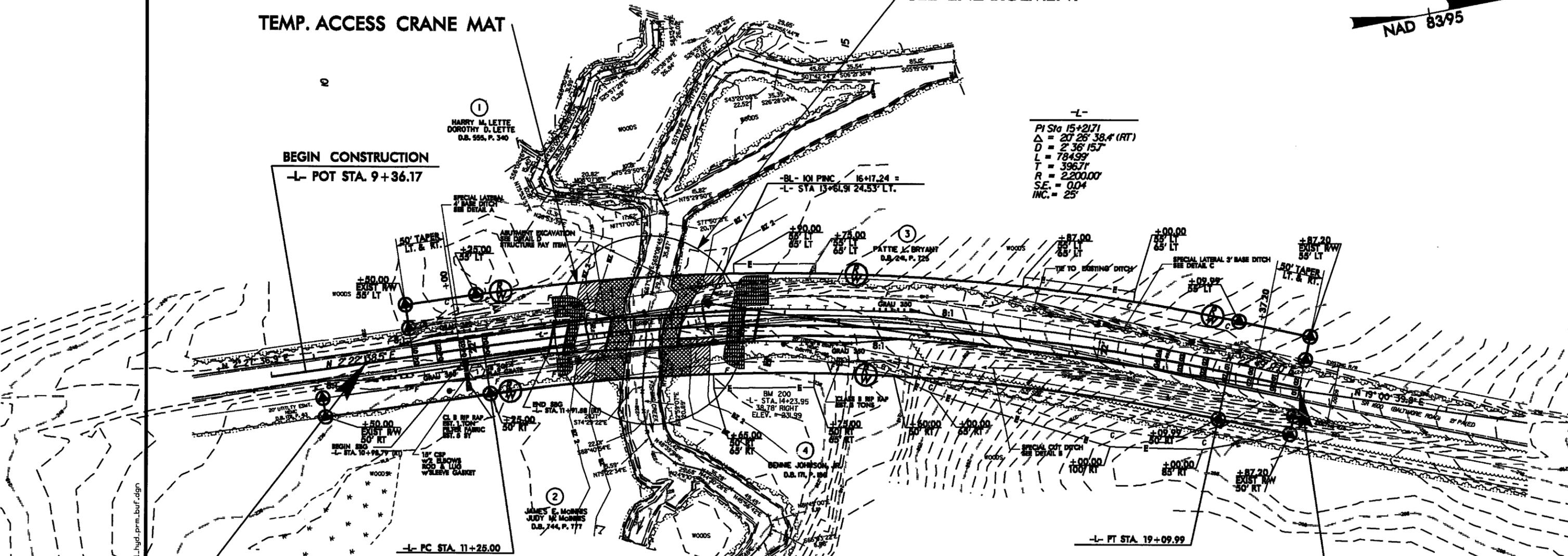


TEMP. ACCESS CRANE MAT

SEE ENLARGEMENT

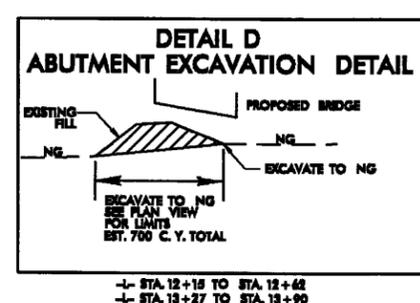
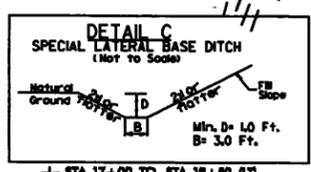
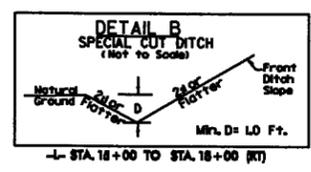
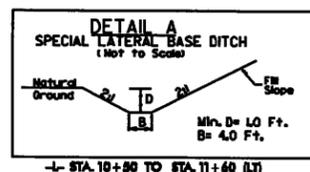
BEGIN CONSTRUCTION  
-L- POT STA. 9+36.17

-L-  
 PI Sta 15+21.71  
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 $D = 2' 36' 15.7"$   
 $L = 784.99'$   
 $T = 396.71'$   
 $R = 2200.00'$   
 $SE = 0.04'$   
 $INC = 25'$



BEGIN TIP PROJECT B-3921  
-L- POT STA. 10+00.00

END TIP PROJECT B-3921  
-L- POT STA. 19+87.20



ALLOWABLE IMPACTS ZONE 1  
 ALLOWABLE IMPACTS ZONE 2



FOR -L- PROFILE SEE SHEET 5

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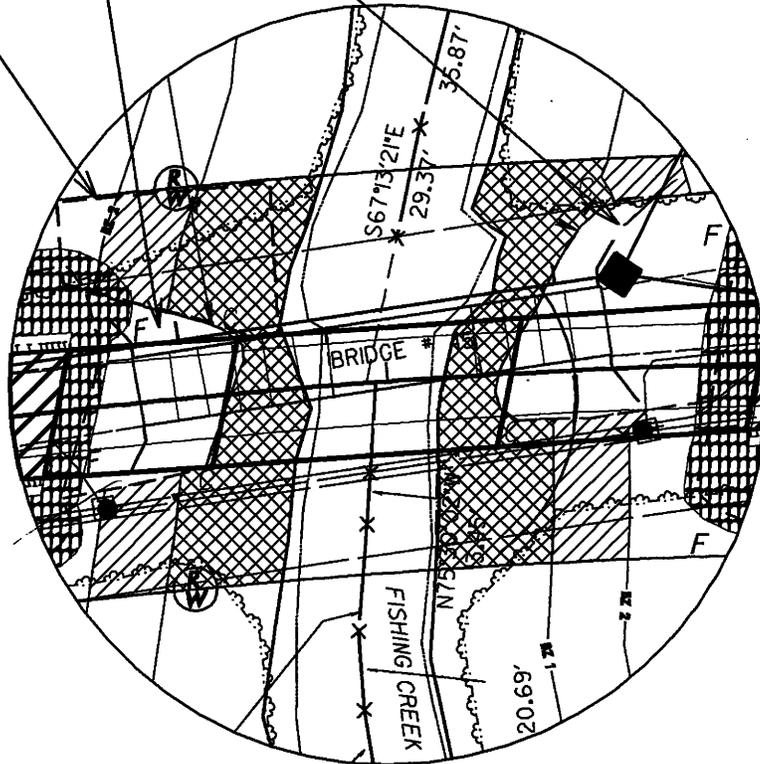




# BUFFER IMPACT ENLARGEMENT

ABUTMENT  
EXCAVATION  
SEE DETAIL D ON  
ROADWAY PLANS

TEMP. ACCESS  
CRANE MAT



N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
WARREN COUNTY

PROJECT: 33355.1.1 (B-3921)

BRIDGE NO. 45 OVER  
FISHING CREEK AND  
APPROACHES ON SR 1600

SHEET 5 OF 7



# Property Owner Contact Report

TIP # B-3921

Owner Last Name/ Business	Owner First Name	Address	City/Town	State	Zip Code	Contact/ Relationship	Home Phone	Contacted By	Contact Date	How Contacted	Comments
Bryant	Pattie L.	3611 N. Rogers Ave.	Baltimore	MD	21207	Same		J.S. Coats	8/13/2004	Letter	Telephone # (410) 597-8485
Falkner Heirs	Betsy	311 E. 19th Street	Patterson	NJ	07524	Same		J. S. Coats	8/13/2004	Letter	Tax map only source of information
Johnson, Jr.	Bennie	311 E. 19th Street	Patterson	NJ	07524	Same		J. S. Coats	8/13/2004	Letter	
Leete	Harry M.	1203 Wise Forks Road	Macon	NC	27551	Same		J.S. Coats	8/13/2004	Letter	
McInnis	James E.	11359 Robert Bost Road	Midland	NC	28107	Same		J.S. Coats	8/13/2004	Letter	

Buffer Drawing  
Sheet *e* of *11*