



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

October 23, 2008

MEMORANDUM TO: Mr. Richard E. Greene, Jr., PE  
Division Four Engineer

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

SUBJECT: Edgecombe County, Replace Bridge No.52 on SR 1505  
over Deep Creek; T.I.P. Number B-4504; Federal Aid  
Project No. BRZ-1505(3); State Project No. 8.2291601

A handwritten signature in black ink, appearing to read "P. S. Harris, III".

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

PSH/gyb

Attachment

Cc:

Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Jay Bennett, P.E., Roadway Design  
Dr. David Chang, P.E., Hydraulics  
Mr. Randy Garris, P.E. State Contract Officer  
Mr. Art McMillan, P.E., Highway Design  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. John F. Sullivan, FHWA  
Ms. Beth Harmon, EEP  
Mr. Rob Hanson, P.E., PDEA Eastern Region Unit Head  
Mr. Chad Cogins, Division Environmental Officer

**PROJECT COMMITMENTS:**

**Edgecombe County  
Bridge No. 52 on SR 1505  
Over Deep Creek  
Federal Aid Project No. BRZ-1505(3)  
State Project No. 8.2291601  
W.B.S. No. 33735.1.1  
T.I.P. No. B-4504**

**Commitments Developed During Project Development**

**Division Four Construction, Resident Engineer's Office – Offsite Detour**

In order to have time to adequately reroute school busses, Edgecombe County Schools should be contacted at (252) 641-2660 at least one month prior to road closure.

Edgecombe County Emergency Services needs to be contacted at (252) 641-7843 at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

**All Design Groups/ Resident Engineer – Anadromous Fish**

A moratorium on in-water construction will be in place from February 15 to June 15 of any given year.

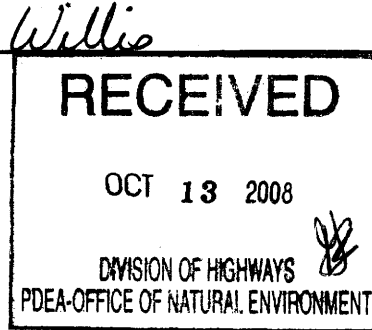
Stream Crossing Guidelines for Anadromous Fish will be implemented in the design and construction of this project.

**All Design Units and Natural Environment Unit**

There is suitable habitat for the Tar Spinymussel and the Red Cockaded Woodpecker. NCDOT biologists have conducted surveys, which resulted in a biological conclusion of "May Affect, Not Likely to Adversely Affect" for both species. USFWS concurs with the determination of "May Affect, Not Likely to Adversely Affect".

**Commitments Developed During Permitting**

There are no special conditions.



October 6, 2008  
 Edgecombe County  
 DWQ Project No. 20081436  
 Bridge 52 on SR 1505  
 TIP No. B-4504

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

Dr. Gregory J. Thorpe, Ph.D., Environmental Management Director  
 NCDOT, PDEA  
 1598 Mail Service Center  
 Raleigh, NC 27699

Dear Dr. Thorpe:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing Bridge 52 in Edgecombe County:

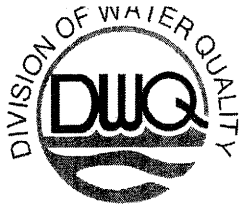
**Tar-Pamlico Riparian Buffer Impacts**

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	1553	0	1553	N/A	743	0	743	N/A
2	2008	0	2008	N/A	335	0	335	N/A
<b>Totals</b>	<b>3561</b>	<b>0</b>	<b>3561</b>	<b>0</b>	<b>1078</b>	<b>0</b>	<b>1078</b>	<b>0</b>

\* n/a = Bridge impact "allowable", no mitigation required  
**Total Buffer Impact for Project: 4,640 square feet.**

The project shall be constructed in accordance with your application dated received September 18, 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 will expire with the accompanying 404 permit.

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 Certification:**

1. 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.
2. 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*.
3. 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.
4. All stormwater runoff shall be directed as sheetflow through stream buffers at nonerosive velocities, unless otherwise approved by this certification.
5. 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.
6. 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.
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. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification..
19. A copy of this Approval shall be maintained on site at the construction site at all times. In addition, this approval and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.
20. 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.
21. 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.
22. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
23. 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 Certification has been completed.
24. Native woody 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.
25. 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.
26. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.



William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

Coleen Sullins, Director  
Division of Water Quality

27. 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*.
- d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

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: Chad Coggins, Division 4 Environmental Officer  
William Wescott, US Army Corps of Engineers, Washington Field Office  
Travis Wilson, NC Wildlife Resources Commission  
Megan Willis, NCDOT NEU  
File Copy

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4504	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33735.1.1	BRZ-1505(3)	P.E.	
33735.2.1	BRZ-1505(3)	RW & UTIL	

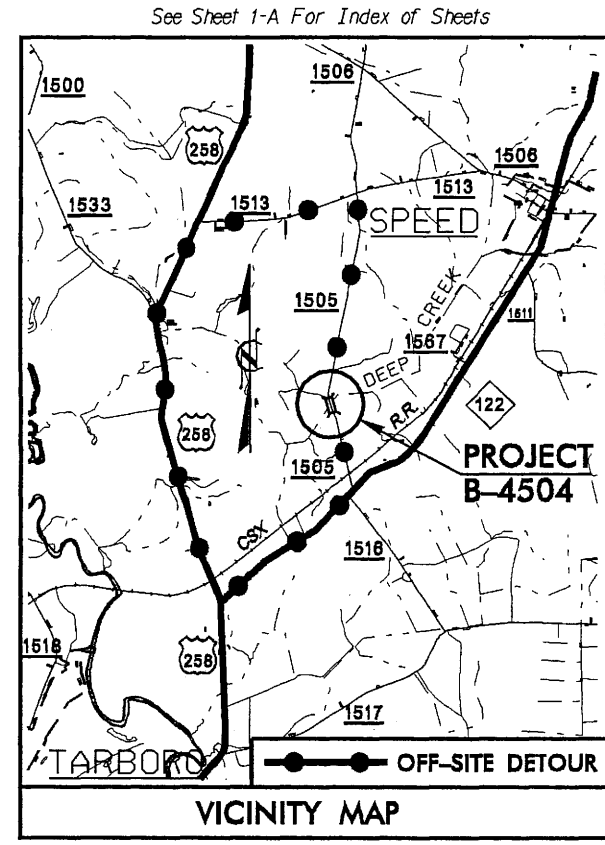
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**EDGECOMBE COUNTY**

LOCATION: BRIDGE NO. 52 OVER DEEP CREEK AND APPROACHES ON SR 1505 (DICKENS ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE

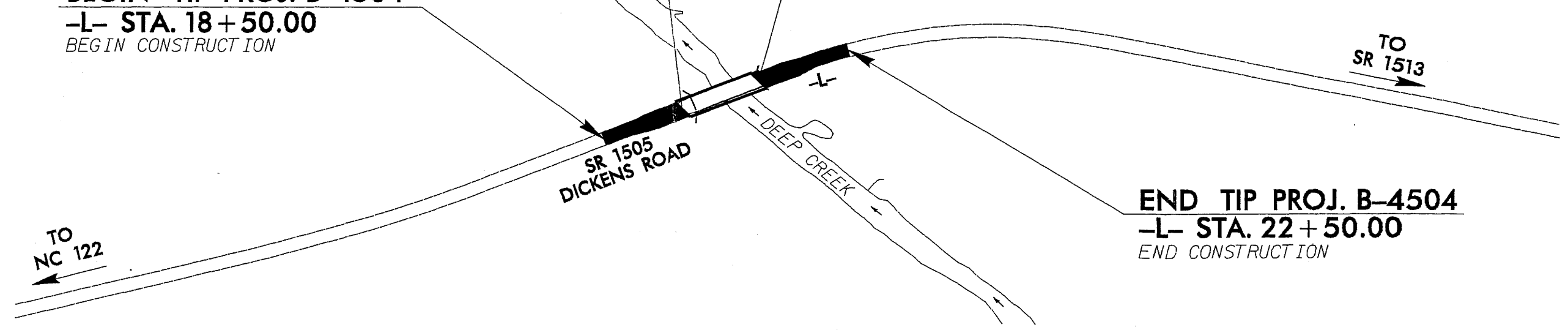
TAR- PAMLICO RIVER BASIN  
WETLAND DRAWINGS  
05/15/2008



BEGIN BRIDGE -L- STA. 19+86.5 +/-  
END BRIDGE -L- STA. 21+06.5 +/-

BEGIN TIP PROJ. B-4504  
-L- STA. 18+50.00  
BEGIN CONSTRUCTION

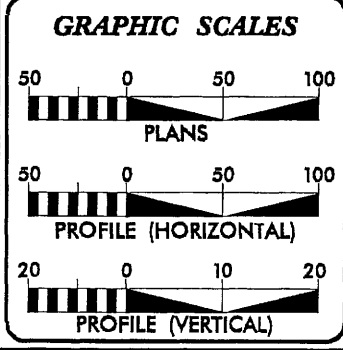
END TIP PROJ. B-4504  
-L- STA. 22+50.00  
END CONSTRUCTION



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDRIES

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

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

ADT 2008 =	237
ADT 2030 =	400
DHV =	10 %
D =	60 %
T =	3 % *
V =	45 MPH
* TTST 1% + DUAL 2%	
FUNC CLASS =	RURAL LOCAL

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4504 =	0.053 +/- MILES
LENGTH STRUCTURE TIP PROJECT B-4504 =	0.023 +/- MILES
TOTAL LENGTH OF TIP PROJECT B-4504 =	0.076 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 31, 2008

LETTING DATE: MARCH 17, 2009

ROGER D. THOMAS, PE  
PROJECT ENGINEER

SAMUEL L. ST. CLAIR  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

SIGNATURE: \_\_\_\_\_ P.E.

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

Permit Drawing  
Sheet **1** of **6**

STATE HIGHWAY DESIGN ENGINEER

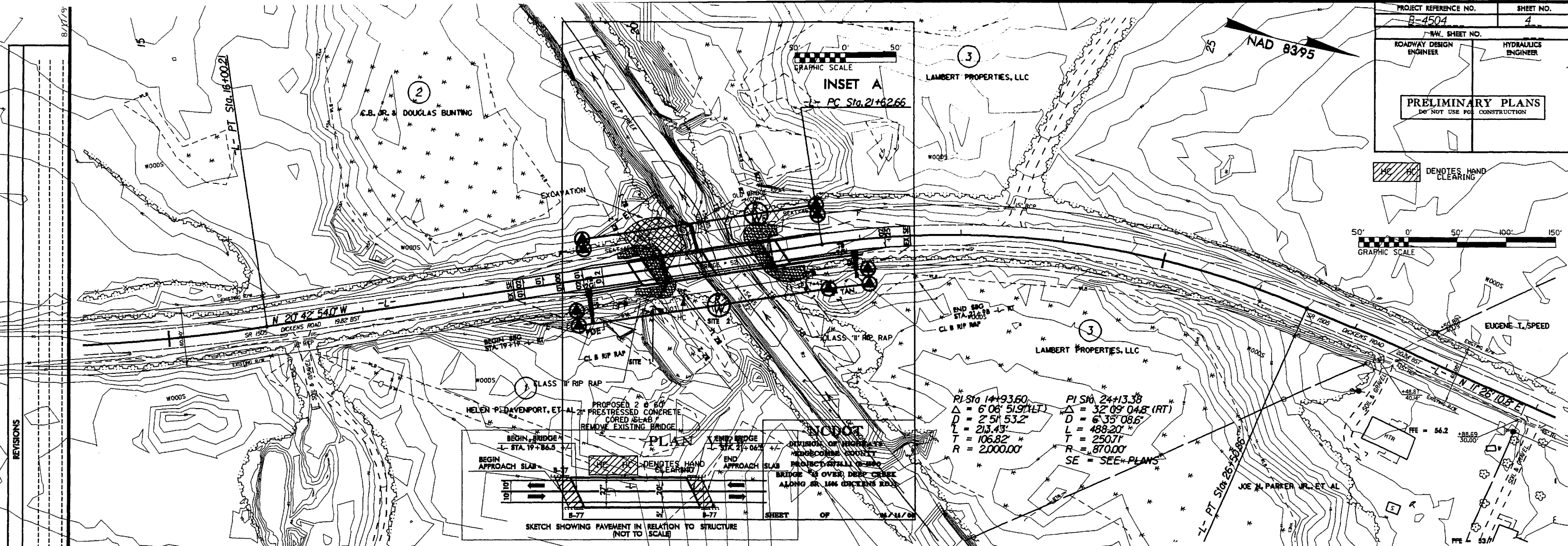
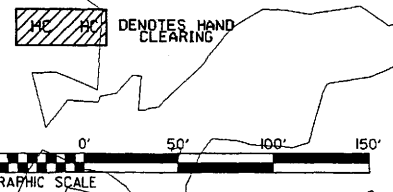
CONTRACT: TIP PROJECT: B-4504

CONTRACT:

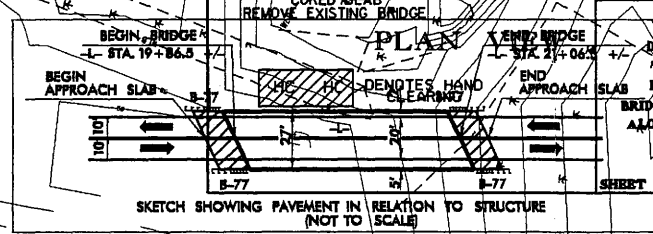
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PI STA 14+93.60      PI STA 24+13.38  
 $\Delta = 6^{\circ} 06' 51.97(L)$        $\Delta = 32^{\circ} 09' 04.8(RT)$   
 $D = 2^{\circ} 51' 53.2$        $D = 6^{\circ} 35' 08.6$   
 $L = 213.43$        $L = 488.20$   
 $T = 106.82$        $T = 250.71$   
 $R = 2000.00$        $R = 870.00$   
 SE = SEE PLANS



SKETCH SHOWING PAVEMENT IN RELATION TO STRUCTURE (NOT TO SCALE)

**BRIDGE HYDRAULIC DATA**

DESIGN DISCHARGE	= 1400	CFS
DESIGN FREQUENCY	= 2	YRS
DESIGN HW ELEVATION	= 46.2	FT
BASE DISCHARGE	= 2100	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 43.1	FT
OVERTOPPING DISCHARGE	= 2100	CFS
OVERTOPPING FREQUENCY	= 2	YRS
OVERTOPPING ELEVATION	= 47.2	FT

DATE OF SURVEY = 8/3/08  
 M.S. ELEVATION AT DATE OF SURVEY = 46.1 FT

PI = 20+65.00  
 EL = 49.25  
 VC = 220

TEN'2 EL 47.0  
 RR SPIKE IN BASE OF CULVERT  
 EL = STA 12+36.30 LT  
 EL = STA 22+50.00 LT  
 (AS CORRECTED BY ROADWAY DESIGN)

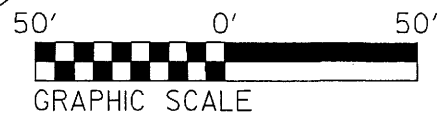
BEGIN BRIDGE STA 19+86.3  
 PRESTRESSED CONCRETE CORED SLAB  
 2x6x60

BEGIN GRADE  
 L STA 18+50.00  
 EL 48.54

END GRADE  
 L STA 22+50.00  
 EL 47.03

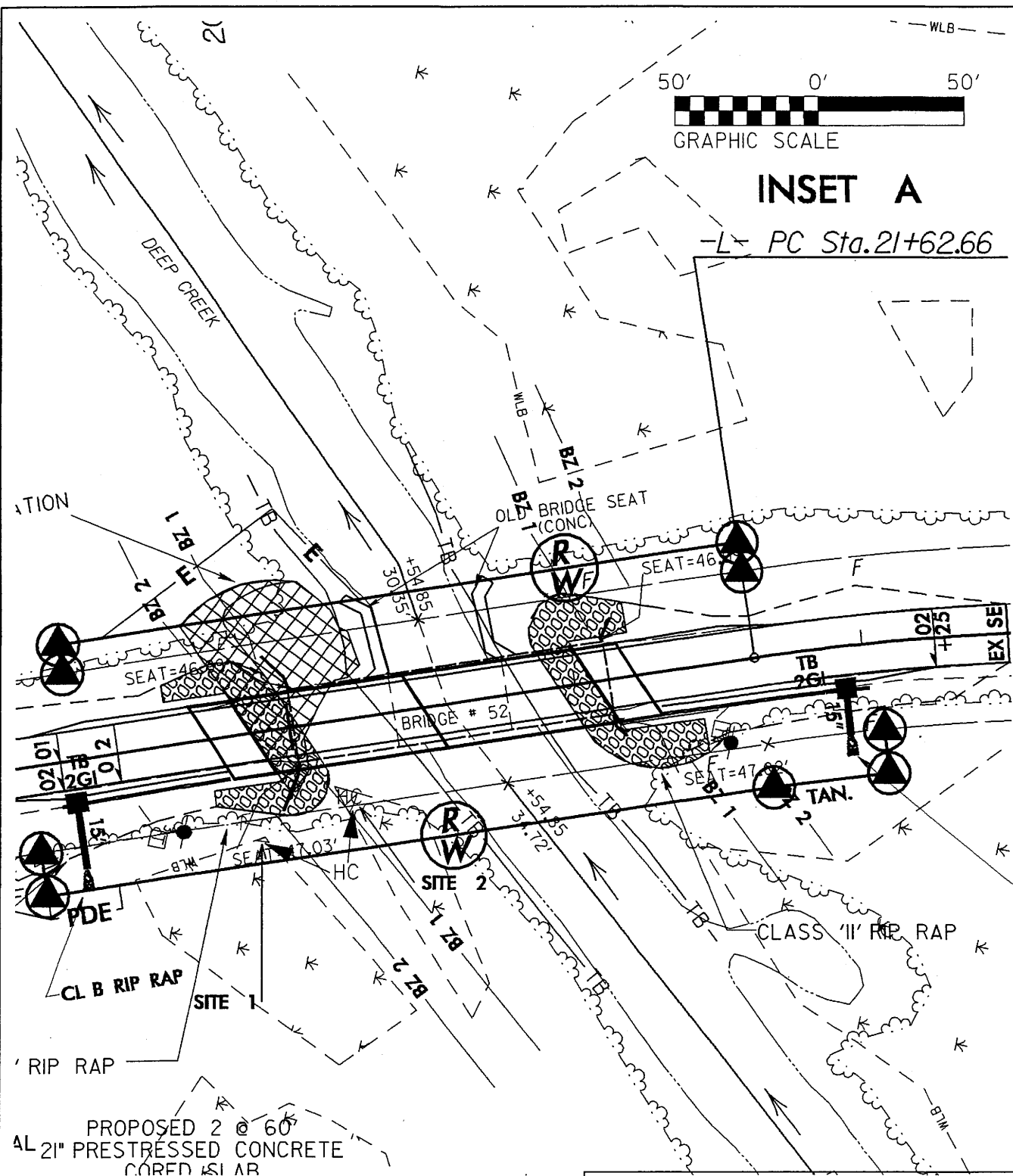
REMOVE EXISTING BRIDGE AND SUBMIT TO ELEV. 41.7

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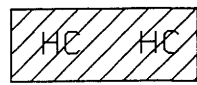
# INSET A

-L- PC Sta. 21+62.66



PROPOSED 2 @ 60"  
AL 21" PRESTRESSED CONCRETE  
CORED SLAB

## PLAN VIEW



HC HC DENOTES HAND CLEARING

**NCDOT**  
 DIVISION OF HIGHWAYS  
 EDGEcombe COUNTY  
 PROJECT: 33735.1.1 (B-4504)  
 BRIDGE #52 OVER DEEP CREEK  
 ALONG SR 1505 (DICKENS RD.)

SHEET **4** OF **6** 05/15/08



# Property Owner Contact Report

TIP # B-4504

Owner Last Name/ Business	Owner First Name	Address	City/Town	State	Zip Code	Contact/ Relationship	Home Phone	Contacted By	Contact Date	How Contacted	Comments
2 Bunting	C. B.	RT 1 Box 144B	Pinetops	NC	27864	Self		K.E.Honeycutt	2-1-05	Letter	
Cooper	Joseph	908 Dickens Road	Tarboro	NC	27886	Joseph Parker		R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
Cooper	Rosa Lee	876 Dickens Road	Tarboro	NC	27886	Joseph Cooper		R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
1 Davenport, et al	Helen P.	1677 NC 122 N	Tarboro	NC	27886	Helen Davenport		R.T.Poythress/K. E.Honeycutt	1-31-05	Phone/Letter	
Dew, Jr.	Billy D.	137 Colonial Rd.	Tarboro	NC	27886	Self		K.E.Honeycutt	2-1-05	Letter	
3 Lambert Properties, LLC		P.O.Box 417	Sharpsburg	NC	27878	Self		K.E.Honeycutt	2-1-05	Letter	
Parker, Jr.	Joe N.	848 Dickens Road	Tarboro	NC	27886	Joseph Cooper		R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
Speed, III	Eugene T.	227 Taylor Norton Rd.	Swansboro	NC	28584	Mrs. E.T. Speed, Jr		R.T.Poythress/K. E.Honeycutt	1-31-05	Phone/Letter	

Permit Drawing  
Sheet 5 of 6



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4504	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33735.1.1	BRZ-1505(3)	P.E.	
33735.2.1	BRZ-1505(3)	RW & UTIL.	

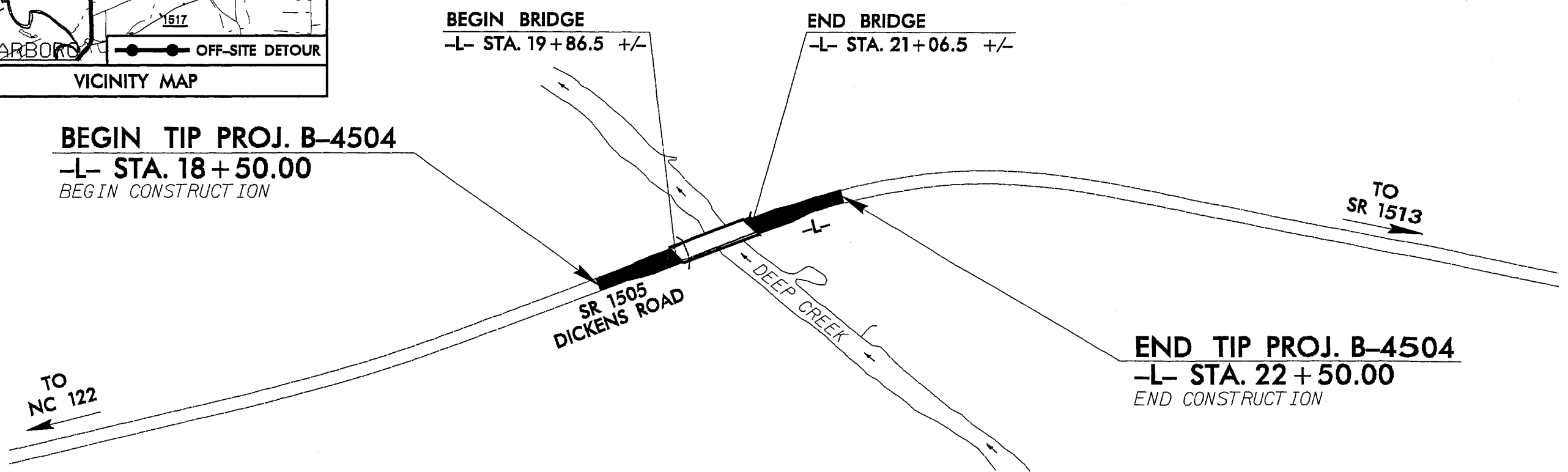
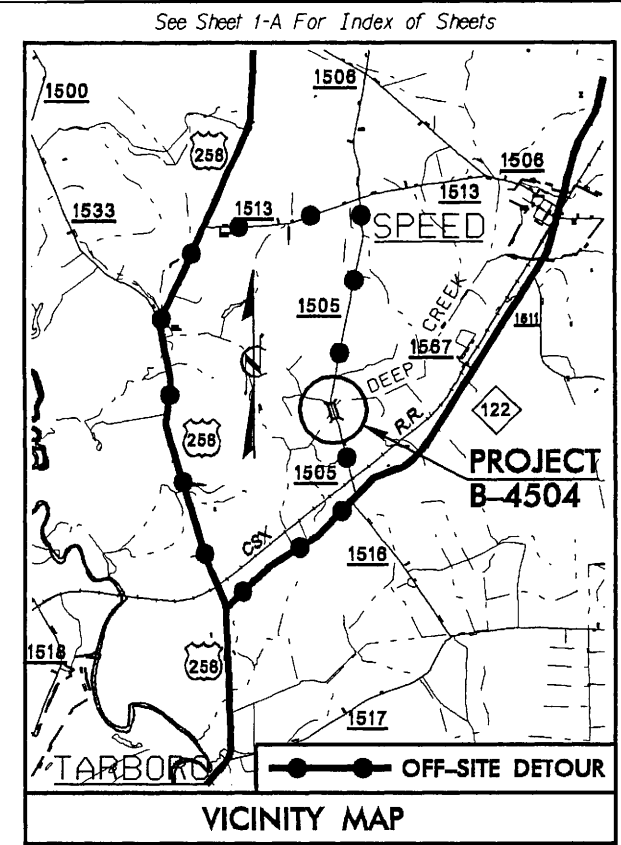
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**EDGECOMBE COUNTY**

LOCATION: BRIDGE NO. 52 OVER DEEP CREEK AND APPROACHES ON SR 1505 (DICKENS ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE

TAR- PAMLICO RIVER BASIN  
RIPARIAN BUFFER ZONE DRAWINGS  
05/15/2008



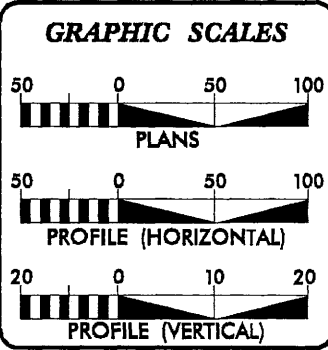
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDRIES

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

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

TIP PROJECT: B-4504

CONTRACT:



**DESIGN DATA**

ADT 2008 =	237
ADT 2030 =	400
DHV =	10 %
D =	60 %
T =	3 %
V =	45 MPH
* TTST 1% + DUAL 2%	
FUNC CLASS =	RURAL LOCAL

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4504 =	0.053 +/- MILES
LENGTH STRUCTURE TIP PROJECT B-4504 =	0.023 +/- MILES
TOTAL LENGTH OF TIP PROJECT B-4504 =	0.076 MILES

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1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 31, 2008	ROGER D. THOMAS, PE PROJECT ENGINEER
LETTING DATE: MARCH 17, 2009	SAMUEL L. ST. CLAIR PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

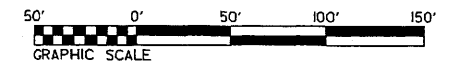
**DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA**

Buffer Drawing  
Sheet 1 of 6  
STATE HIGHWAY DESIGN ENGINEER

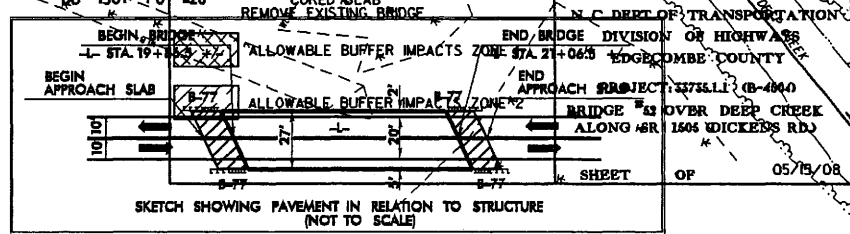
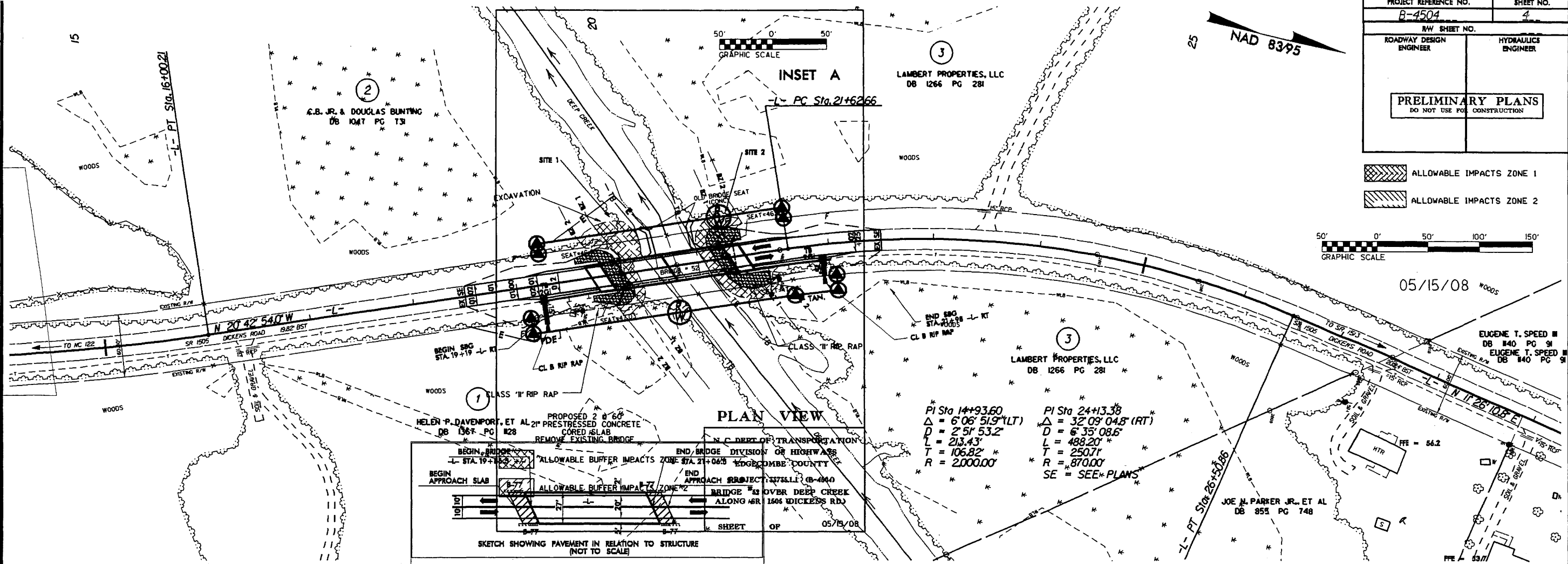
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ALLOWABLE IMPACTS ZONE 1  
 ALLOWABLE IMPACTS ZONE 2



05/15/08



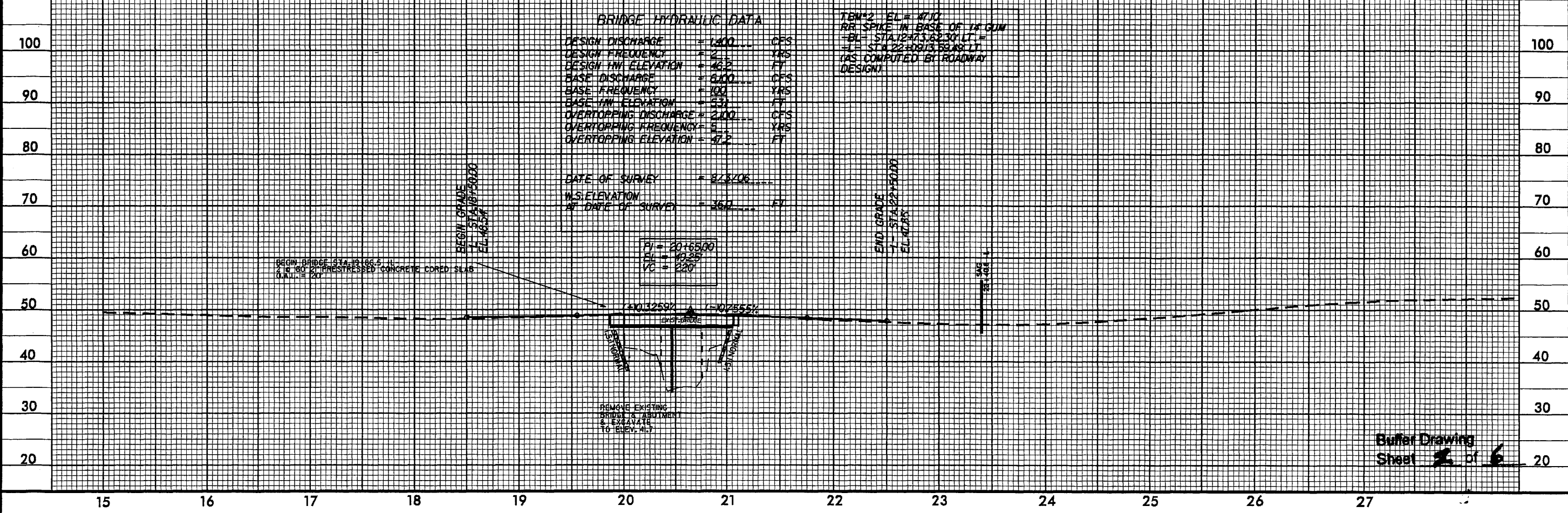
**BRIDGE HYDRAULIC DATA**

DESIGN DISCHARGE	= 1,400	CFS
DESIGN FREQUENCY	= 2	YRS
DESIGN HW ELEVATION	= 46.2	FT
BASE DISCHARGE	= 3,100	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 53.1	FT
OVERTOPPING DISCHARGE	= 2,100	CFS
OVERTOPPING FREQUENCY	= 5	YRS
OVERTOPPING ELEVATION	= 47.2	FT

TEN#2 EL = 47.0  
 RR SPIKE IN BASE OF 14 GUN  
 BL - STA 12+73.82 30' LT =  
 L - STA 22+09/3.58 30' LT  
 (AS COMPUTED BY ROADWAY DESIGN)

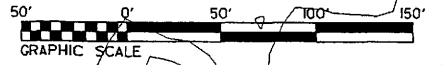
DATE OF SURVEY = 8/3/06  
 M.S. ELEVATION AT DATE OF SURVEY = 36.1 FT

PI = 20+65.00  
 EL = 40.25  
 VC = 220

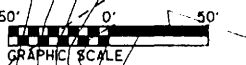


15-MAY-2008 07:37  
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ALLOWABLE IMPACTS ZONE 1  
ALLOWABLE IMPACTS ZONE 2



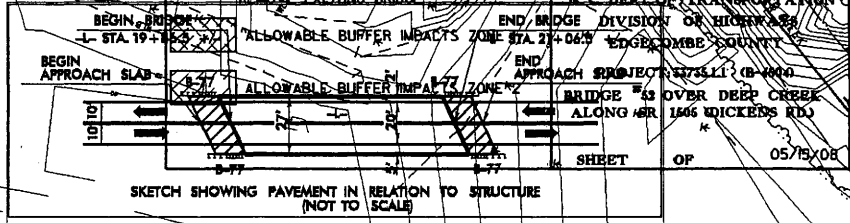
05/15/08



INSET A

PC Sta. 21+62.66

PLAN VIEW



$PI\ STA\ 14+93.60$   
 $\Delta = 6^{\circ}08'51.97(L)$   
 $D = 251'53.2'$   
 $L = 213.43'$   
 $T = 106.82'$   
 $R = 2000.00'$

$PI\ STA\ 24+13.38$   
 $\Delta = 32^{\circ}09'04.8'(RT)$   
 $D = 635'08.6'$   
 $L = 488.20'$   
 $T = 250.71'$   
 $R = 870.00'$   
 SE = SEE PLANS

**BRIDGE HYDRAULIC DATA**

DESIGN DISCHARGE = 1400 CFS  
 DESIGN FREQUENCY = 2%  
 DESIGN HW ELEVATION = 46.2 FT  
 BASE DISCHARGE = 2100 CFS  
 BASE FREQUENCY = 100%  
 BASE HW ELEVATION = 53.1 FT  
 OVERTOPPING DISCHARGE = 2100 CFS  
 OVERTOPPING FREQUENCY = 5%  
 OVERTOPPING ELEVATION = 47.2 FT

DATE OF SURVEY = 8/8/06  
 WS ELEVATION AT DATE OF SURVEY = 36.0 FT

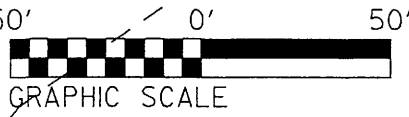
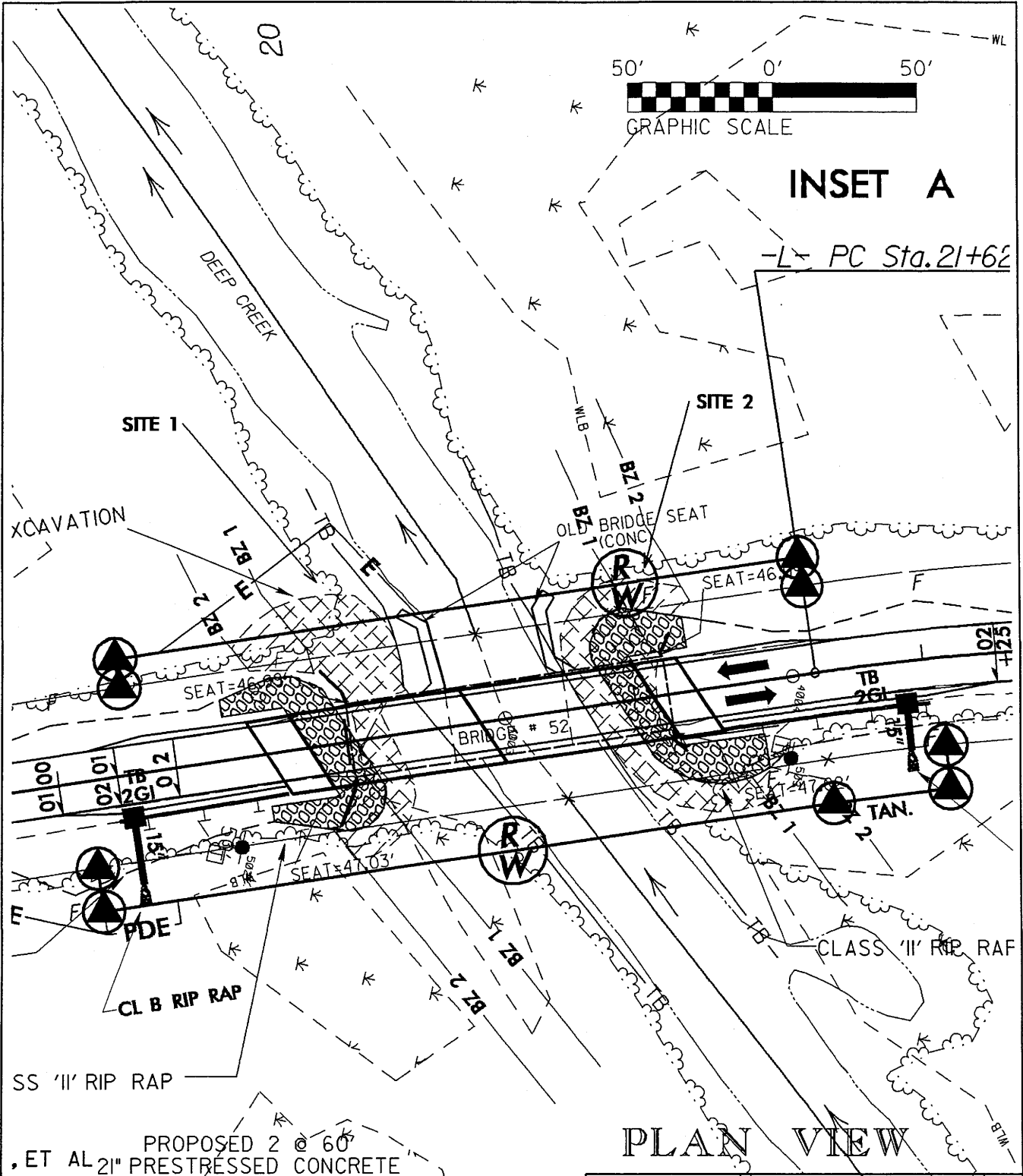
$PI = 20+65.00$   
 $EL = 49.25'$   
 $VC = 220'$

$+0.325\%$      $-0.755\%$

REMOVE EXISTING BRIDGE & RECONSTRUCT TO ELEV. 41.7

ITEM 2: ELIM. RTD RR SPIKE IN BASE OF BRIDGE  
 (EL. STA. 19+82.50 TO 19+85.00)  
 (AS COMPARED TO BRIDGEWAY DESIGN)


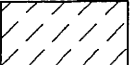
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 4504.dwg



**INSET A**

-L- PC Sta. 21+62

**PLAN VIEW**

-  ALLOWABLE BUFFER IMPACTS ZONE 1
-  ALLOWABLE BUFFER IMPACTS ZONE 2

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

PROJECT: 33735.1.1 (B-4504)  
 BRIDGE #52 OVER DEEP CREEK  
 ALONG SR 1505. (DICKENS RD.)

SHEET 4 OF 6 05/15/08





# Property Owner Contact Report

TIP # B-4504

Owner Last Name/ Business	Owner First Name	Address	City/Town	State	Zip Code	Contact/ Relationship	Home Phone	Contacted By	Contact Date	How Contacted	Comments
2 Bunting	C. B.	RT 1 Box 144B	Pinetops	NC	27864	Self		K.E.Honeycutt	2-1-05	Letter	
Cooper	Joseph	908 Dickens Road	Tarboro	NC	27886	Joseph Parker		R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
Cooper	Rosa Lee	876 Dickens Road	Tarboro	NC	27886	Joseph Cooper		R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
1 Davenport, et al	Helen P.	1677 NC 122 N	Tarboro	NC	27886	Helen Davenport		R.T.Poythress/K. E.Honeycutt	1-31-05	Phone/Letter	
Dew, Jr.	Billy D.	137 Colonial Rd.	Tarboro	NC	27886	Self		K.E.Honeycutt	2-1-05	Letter	
3 Lambert Properties, LLC		P.O.Box 417	Sharpsburg	NC	27878	Self		K.E.Honeycutt	2-1-05	Letter	
Parker, Jr.	Joe N.	848 Dickens Road	Tarboro	NC	27886	Joseph Cooper		R.T.Poythress/K. E.Honeycutt	1-20-05	Person/Letter	
Speed, III	Eugene T.	227 Taylor Norton Rd.	Swansboro	NC	28584	Mrs. E.T. Speed, Jr		R.T.Poythress/K. E.Honeycutt	1-31-05	Phone/Letter	

Buffer Drawing Sheet 5 of 6



09/08/09

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

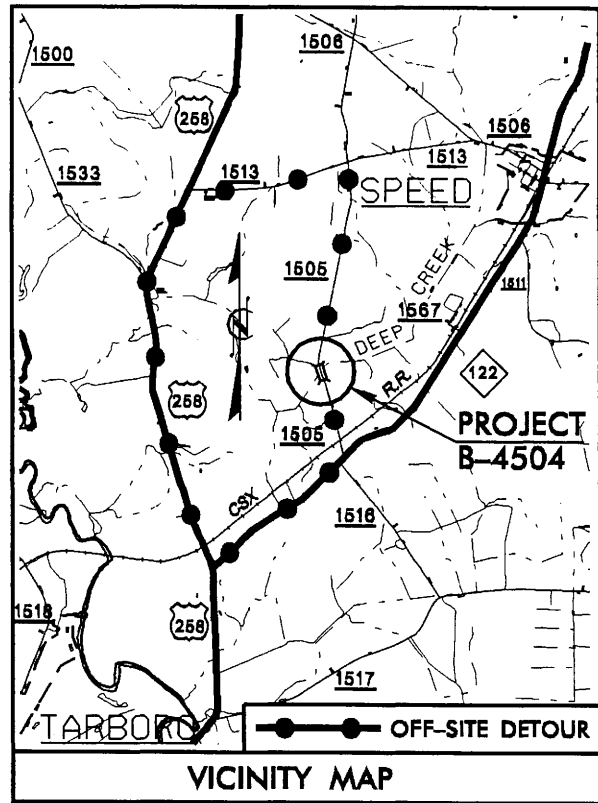
**EDGECOMBE COUNTY**

LOCATION: BRIDGE NO. 52 OVER DEEP CREEK AND APPROACHES ON SR 1505 (DICKENS ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4504	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
33735.1.1	BRZ-1505(3)	P.E.	
33735.2.1	BRZ-1505(3)	R/W & UTIL.	

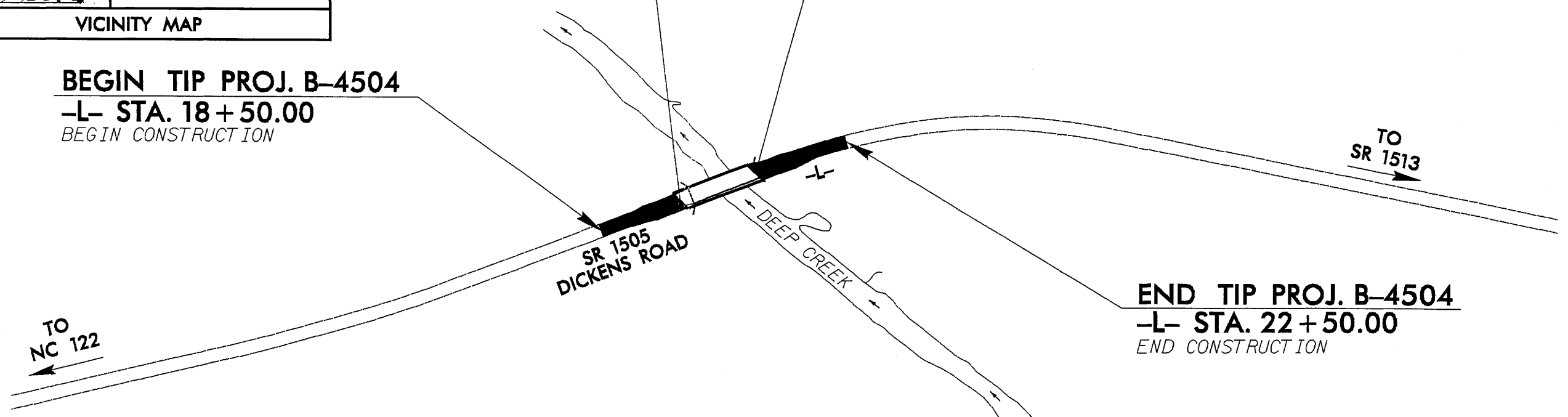
TIP PROJECT: B-4504



**BEGIN TIP PROJ. B-4504**  
-L- STA. 18+50.00  
BEGIN CONSTRUCTION

**BEGIN BRIDGE**  
-L- STA. 19+86.5 +/-

**END BRIDGE**  
-L- STA. 21+06.5 +/-

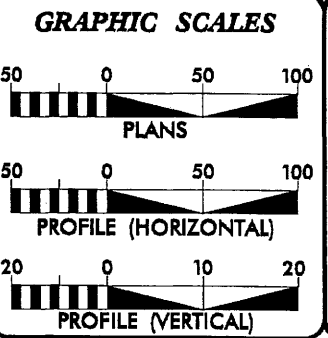


**END TIP PROJ. B-4504**  
-L- STA. 22+50.00  
END CONSTRUCTION

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDRIES

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

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

ADT 2008 =	237
ADT 2030 =	400
DHV =	10 %
D =	60 %
T =	3 % *
V =	45 MPH
* TTST	1% + DUAL 2%
FUNC CLASS	RURAL LOCAL

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4504	= 0.053 +/- MILES
LENGTH STRUCTURE TIP PROJECT B-4504	= 0.023 +/- MILES
TOTAL LENGTH OF TIP PROJECT B-4504	= 0.076 MILES

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

2006 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
MARCH 31, 2008

**LETTING DATE:**  
MARCH 17, 2009

**ROGER D. THOMAS, PE**  
PROJECT ENGINEER

**SAMUEL L. ST. CLAIR**  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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

**DIVISION OF HIGHWAYS**  
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

27-MAY-2008 14:01  
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\$\$\$\$\$USERNAME\$\$\$\$\$

CONTRACT:













Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering












STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# CONVENTIONAL PLAN SHEET SYMBOLS












### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	----- 
Property Corner	----- 
Property Monument	----- 
Parcel/Sequence Number	----- 
Existing Fence Line	----- 
Proposed Woven Wire Fence	----- 
Proposed Chain Link Fence	----- 
Proposed Barbed Wire Fence	----- 
Existing Wetland Boundary	----- 
Proposed Wetland Boundary	----- 
Existing Endangered Animal Boundary	----- 
Existing Endangered Plant Boundary	----- 


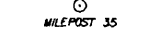
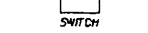
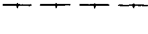
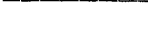
### BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or UG Tank Cap	----- 
Sign	----- 
Well	----- 
Small Mine	----- 
Foundation	----- 
Area Outline	----- 
Cemetery	----- 
Building	----- 
School	----- 
Church	----- 
Dam	----- 














### HYDROLOGY:

Stream or Body of Water	----- 
Hydro, Pool or Reservoir	----- 
Jurisdictional Stream	----- 
Buffer Zone 1	----- 
Buffer Zone 2	----- 
Flow Arrow	----- 
Disappearing Stream	----- 
Spring	----- 
Swamp Marsh	----- 
Proposed Lateral, Tail, Head Ditch	----- 
False Sump	----- 














### RAILROADS:

Standard Gauge	----- 
RR Signal Milepost	----- 
Switch	----- 
RR Abandoned	----- 
RR Dismantled	----- 







### RIGHT OF WAY:

Baseline Control Point	----- 
Existing Right of Way Marker	----- 
Existing Right of Way Line	----- 
Proposed Right of Way Line	----- 
Proposed Right of Way Line with Iron Pin and Cap Marker	----- 
Proposed Right of Way Line with Concrete or Granite Marker	----- 
Existing Control of Access	----- 
Proposed Control of Access	----- 
Existing Easement Line	----- 
Proposed Temporary Construction Easement	----- 
Proposed Temporary Drainage Easement	----- 
Proposed Permanent Drainage Easement	----- 
Proposed Permanent Utility Easement	----- 

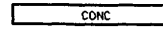
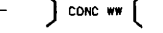

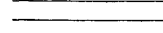
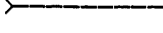
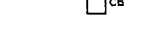



### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	----- 
Existing Curb	----- 
Proposed Slope Stakes Cut	----- 
Proposed Slope Stakes Fill	----- 
Proposed Wheel Chair Ramp	----- 
Proposed Wheel Chair Ramp Curb Cut	----- 
Curb Cut for Future Wheel Chair Ramp	----- 
Existing Metal Guardrail	----- 
Proposed Guardrail	----- 
Existing Cable Guiderail	----- 
Proposed Cable Guiderail	----- 
Equality Symbol	----- 
Pavement Removal	----- 












### VEGETATION:

Single Tree	----- 
Single Shrub	----- 
Hedge	----- 
Woods Line	----- 
Orchard	----- 
Vineyard	----- 














### EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	----- 
Bridge Wing Wall, Head Wall and End Wall	----- 
MINOR:	
Head and End Wall	----- 
Pipe Culvert	----- 
Footbridge	----- 
Drainage Box: Catch Basin, DI or JB	----- 
Paved Ditch Gutter	----- 
Storm Sewer Manhole	----- 
Storm Sewer	----- 








### UTILITIES:

POWER:	
Existing Power Pole	----- 
Proposed Power Pole	----- 
Existing Joint Use Pole	----- 
Proposed Joint Use Pole	----- 
Power Manhole	----- 
Power Line Tower	----- 
Power Transformer	----- 
UG Power Cable Hand Hole	----- 
H-Frame Pole	----- 
Recorded U/G Power Line	----- 
Designated U/G Power Line (S.U.E.*)	----- 









### TELEPHONE:

Existing Telephone Pole	----- 
Proposed Telephone Pole	----- 
Telephone Manhole	----- 
Telephone Booth	----- 
Telephone Pedestal	----- 
Telephone Cell Tower	----- 
UG Telephone Cable Hand Hole	----- 
Recorded U/G Telephone Cable	----- 
Designated U/G Telephone Cable (S.U.E.*)	----- 
Recorded U/G Telephone Conduit	----- 
Designated U/G Telephone Conduit (S.U.E.*)	----- 
Recorded U/G Fiber Optics Cable	----- 
Designated U/G Fiber Optics Cable (S.U.E.*)	----- 






### WATER:

Water Manhole	----- 
Water Meter	----- 
Water Valve	----- 
Water Hydrant	----- 
Recorded U/G Water Line	----- 
Designated U/G Water Line (S.U.E.*)	----- 
Above Ground Water Line	----- 







### TV:

TV Satellite Dish	----- 
TV Pedestal	----- 
TV Tower	----- 
UG TV Cable Hand Hole	----- 
Recorded U/G TV Cable	----- 
Designated U/G TV Cable (S.U.E.*)	----- 
Recorded U/G Fiber Optic Cable	----- 
Designated U/G Fiber Optic Cable (S.U.E.*)	----- 











### GAS:

Gas Valve	----- 
Gas Meter	----- 
Recorded U/G Gas Line	----- 
Designated U/G Gas Line (S.U.E.*)	----- 
Above Ground Gas Line	----- 

### SANITARY SEWER:

Sanitary Sewer Manhole	----- 
Sanitary Sewer Cleanout	----- 
UG Sanitary Sewer Line	----- 
Above Ground Sanitary Sewer	----- 
Recorded SS Forced Main Line	----- 
Designated SS Forced Main Line (S.U.E.*)	----- 

### MISCELLANEOUS:

Utility Pole	----- 
Utility Pole with Base	----- 
Utility Located Object	----- 
Utility Traffic Signal Box	----- 
Utility Unknown U/G Line	----- 
UG Tank; Water, Gas, Oil	----- 
A/G Tank; Water, Gas, Oil	----- 
UG Test Hole (S.U.E.*)	----- 
Abandoned According to Utility Records	----- 
End of Information	----- 

# SURVEY CONTROL SHEET B-4504

PROJECT REFERENCE NO.	SHEET NO.
B-4504	1 C
Location and Surveys	

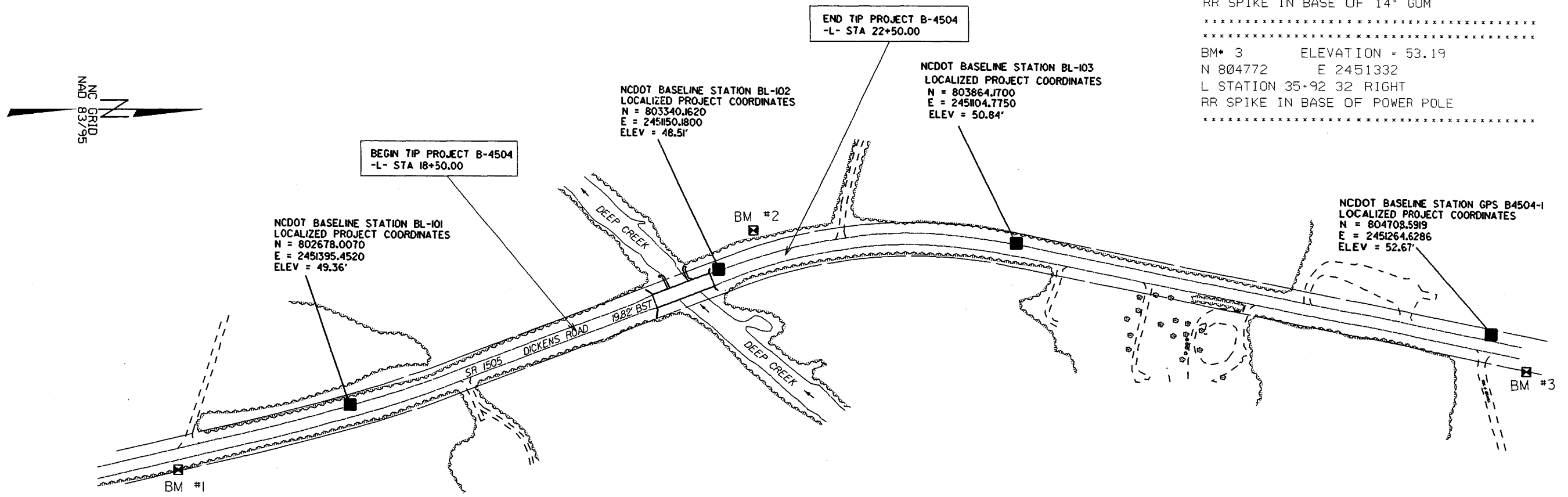
### CONTROL DATA

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
	101	BL-101	802678.0070	2451395.4520	49.36	14+23.01	13.51 LT
	102	BL-102	803340.1620	2451150.1800	48.51	21+30.55	16.50 LT
	103	BL-103	803864.1700	2451104.7750	50.84	26+56.51	11.86 LT
	1	GPS B4504-1	804708.5919	2451264.6286	52.67	35+15.93	22.18 LT

### BENCHMARK DATA

```

*****
BM#1      ELEVATION = 54.32
N 802375  E 2451513
L STATION 11+00 27 RIGHT
RR SPIKE IN BASE OF 10' GUM
*****
BM# 2     ELEVATION = 47.10
N 803402  E 2451082
L STATION 22+09 59 LEFT
RR SPIKE IN BASE OF 14" GUM
*****
BM# 3     ELEVATION = 53.19
N 804772  E 2451332
L STATION 35+92 32 RIGHT
RR SPIKE IN BASE OF POWER POLE
*****
    
```



### NOTES:

THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:  
[HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT](http://www.doh.dot.state.nc.us/preconstruct/highway/location/project)  
 FILE : B4504\_LS\_CONTROL\_061121.TXT

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT.  
 IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

■ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.

PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.  
 CONTROL NETWORK FOR B4504 ESTABLISHED FROM NGS ONLINE POSITIONING USER SERVICE (OPUS)

NOTE: DRAWING NOT TO SCALE

### DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B4504-1" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 804708.594(f1) EASTING: 2451264.629(f1) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99995033 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS B4504-1" TO -L- STATION 17+50.00 IS S 01°11'11" E 1718.91' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

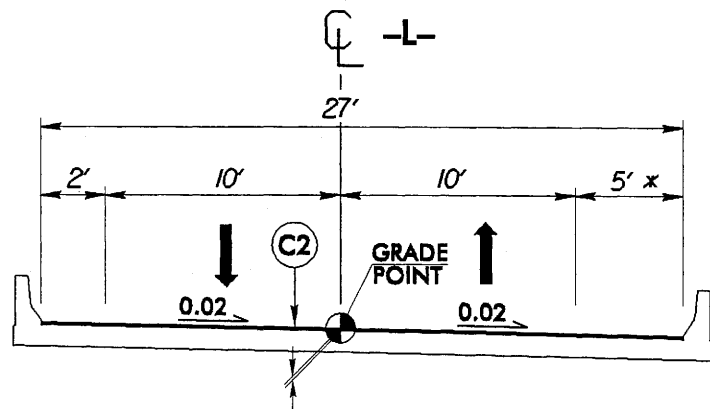
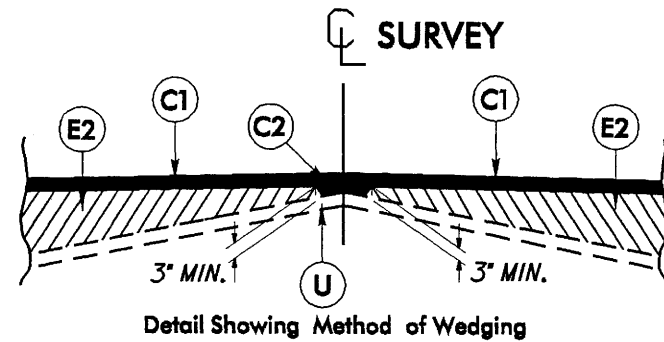
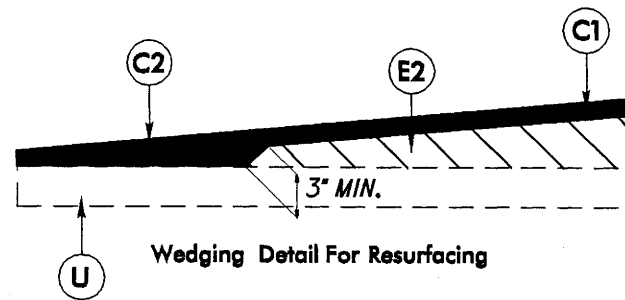
6/2/99

# PAVEMENT SCHEDULE

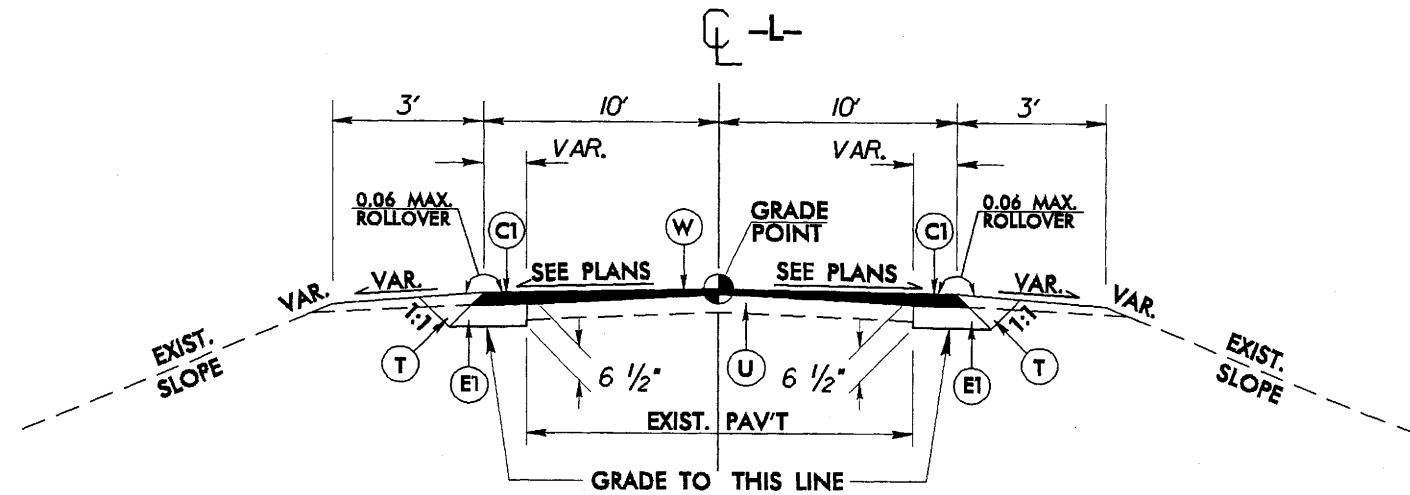
C1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	T	EARTH MATERIAL
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT TO EXCEED 3" IN DEPTH.	U	EXISTING PAVEMENT
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 466 LBS. PER SQ. YD.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH.		

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

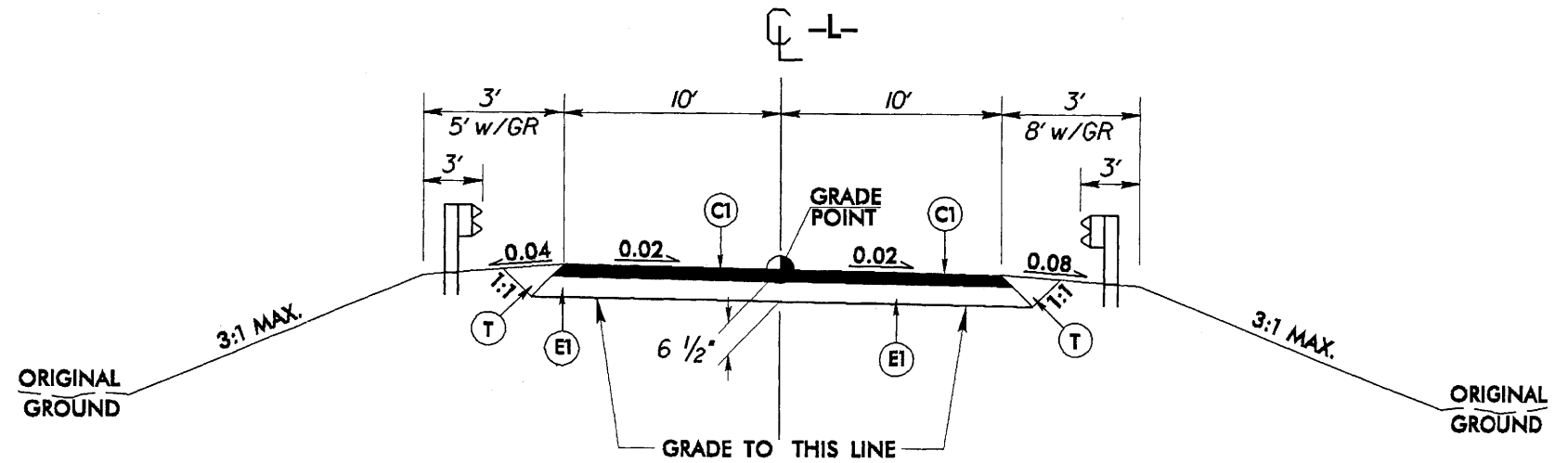
PROJECT REFERENCE NO. B-4504	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	



\* ADDITIONAL WIDTH NEEDED TO ACCOMMODATE HYDRAULIC SPREAD



USE TYPICAL SECTION NO. 1  
FROM -L- STA. 18+50.00 TO -L- STA. 19+00.00  
FROM -L- STA. 22+00.00 TO -L- STA. 22+50.00



USE TYPICAL SECTION NO. 2  
FROM -L- STA. 19+00.00 TO -L- STA. 19+86.5 +/- (BEGIN BRIDGE)  
FROM -L- STA. 21+06.5 +/- (END BRIDGE) TO -L- STA. 22+00.00

27-MAY-2008 14:01 1504\_r.dwg -tup.dgn

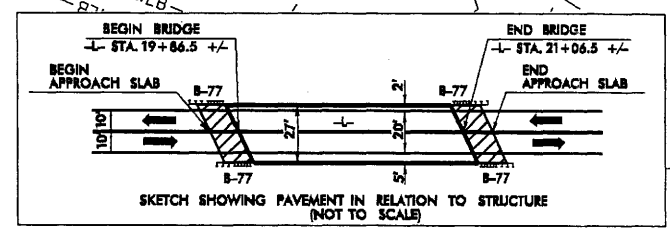
8/17/99

PROJECT REFERENCE NO. B-4504	SHEET NO. 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> <small>DO NOT USE FOR CONSTRUCTION</small>	

**END TIP PROJ. B-4504**  
-L- STA. 22+50.00  
END CONSTRUCTION

(-BL-103)  
-BL- POT STA. 17+32.09 =  
-L- STA. 26+56.51 (11.86' LT)

**BEGIN TIP PROJ. B-4504**  
-L- STA. 18+50.00  
BEGIN CONSTRUCTION



PI Sta 14+93.60  
Δ = 6'06" 519' (LT)  
D = 2'51" 53.2"  
L = 213.43'  
T = 106.82'  
R = 2000.00'

PI Sta 24+13.38  
Δ = 32'09" 048' (RT)  
D = 6'35" 086"  
L = 488.20'  
T = 250.71'  
R = 870.00'  
SE = SEE PLANS

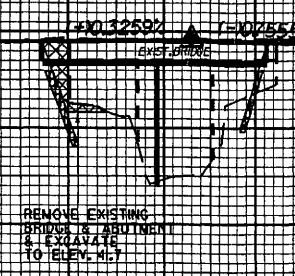
**BRIDGE HYDRAULIC DATA**

DESIGN DISCHARGE = 1,400 CFS  
DESIGN FREQUENCY = 2 YRS  
DESIGN HW ELEVATION = 46.2 FT  
BASE DISCHARGE = 6,100 CFS  
BASE FREQUENCY = 100 YRS  
BASE HW ELEVATION = 53.1 FT  
OVERTOPPING DISCHARGE = 2,100 CFS  
OVERTOPPING FREQUENCY = 5 YRS  
OVERTOPPING ELEVATION = 47.2 FT

DATE OF SURVEY = 8/3/06  
W.S. ELEVATION AT DATE OF SURVEY = 36.0 FT

TBM#2 EL = 47.10'  
RR SPIKE IN BASE OF 14" GUM  
-BL- STA. 12+73.62, 30' LT. =  
-L- STA. 22+09.13, 59.49' LT.  
(AS COMPUTED BY ROADWAY DESIGN)

PI = 20+65.00  
EL = 49.25'  
VC = 220'

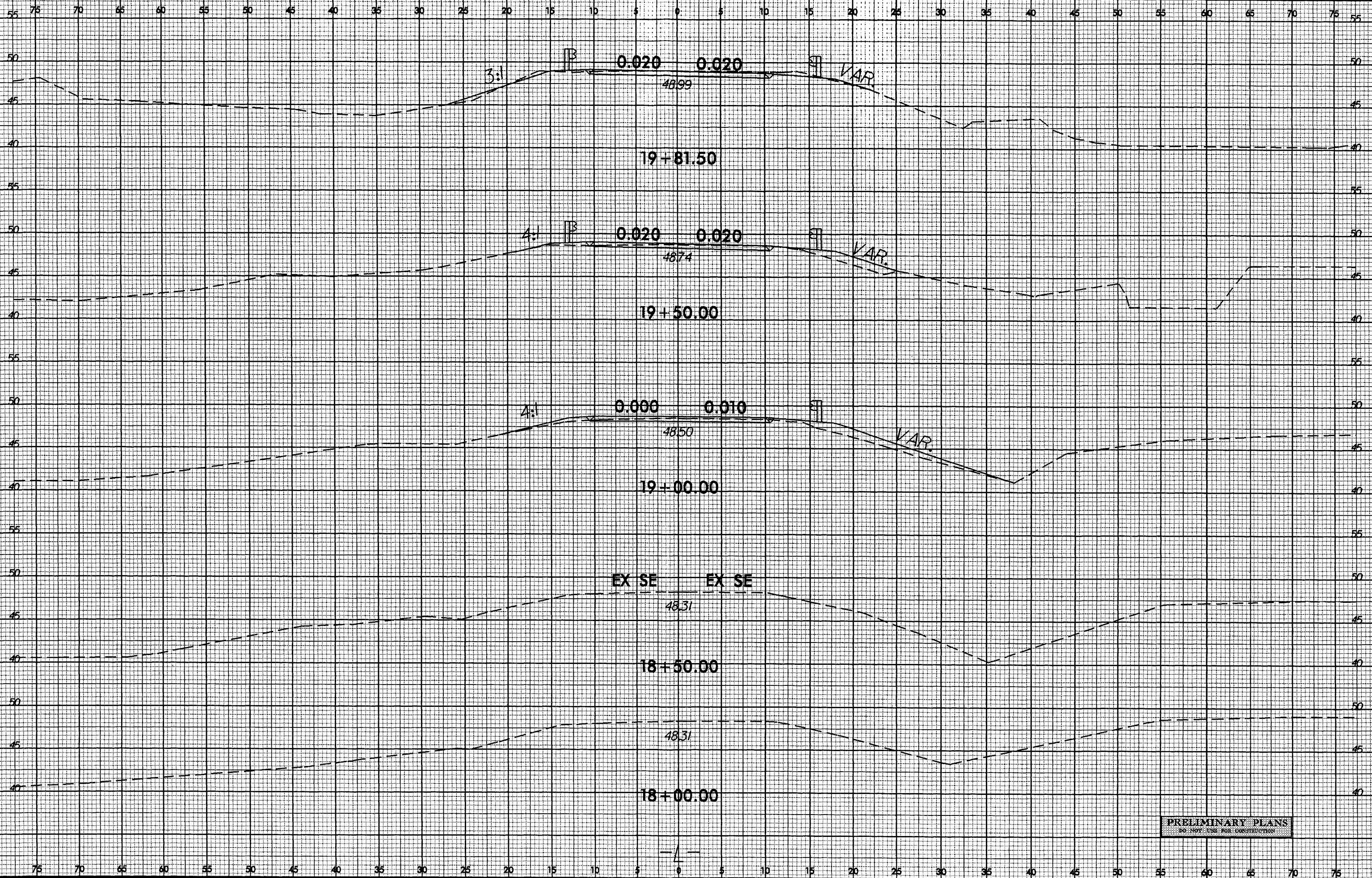


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REVISIONS



8/23/99

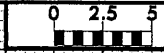


**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

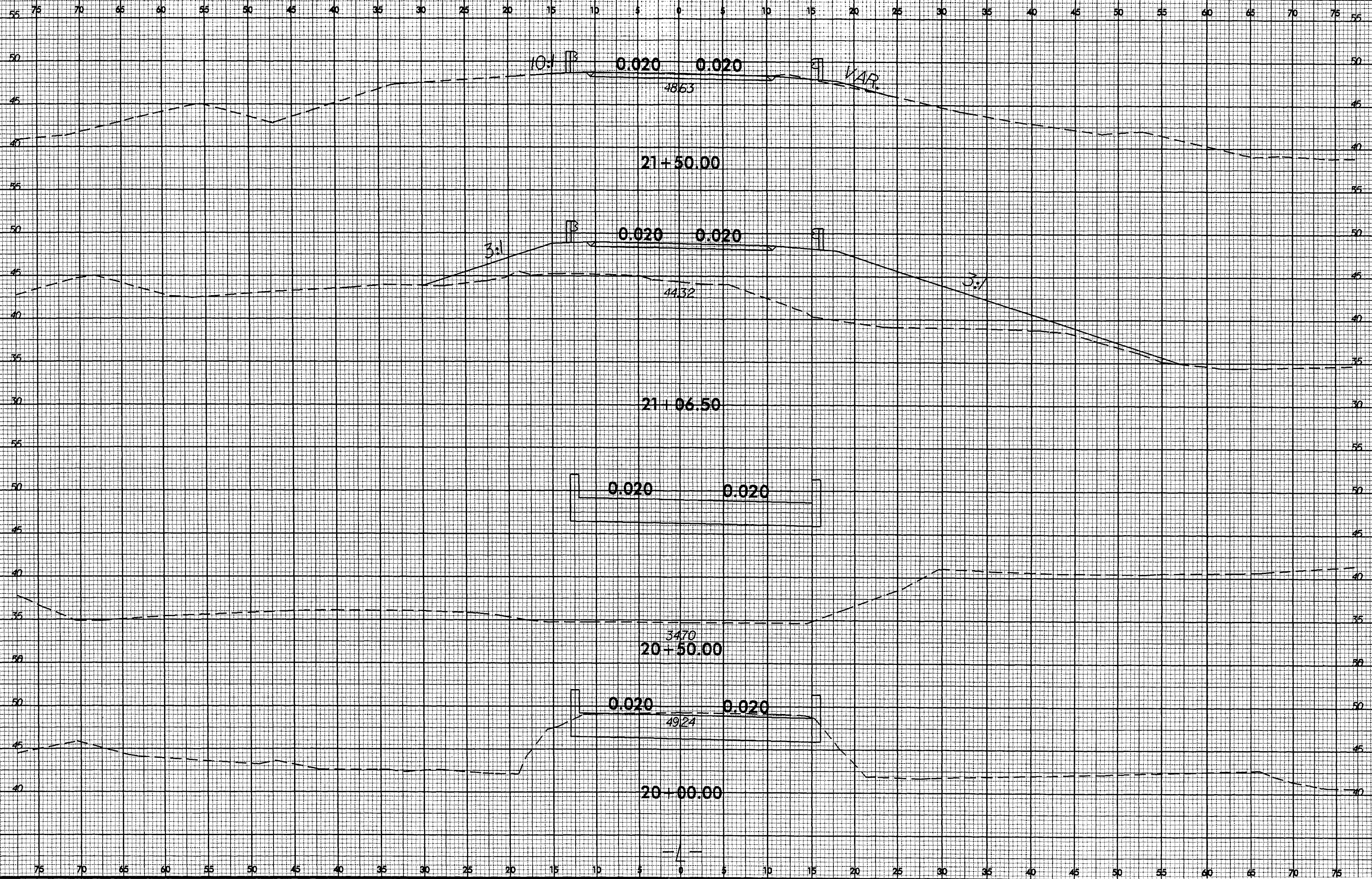
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8/23/99



PROJ. REFERENCE NO. B-4504 SHEET NO. X-2



27-MAY-2008 14:01  
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