STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

October 31, 2013

U. S. Army Corps of Engineers
Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, NC 28801-5006

ATTN: Ms. Amanda Fuemmeler
NCDOT Coordinator

Subject: **Modification of Section 404 Nationwide Permit 13 and 33 and Modification of Section 401 Water Quality Certification** for the proposed replacement of Bridge No. 215 over Mountain Creek on SR 1542 in Stanly County, Federal Aid Project No. BRZ-1542(7), Division 10, TIP No. B-5137, Debit $240 from WBS 42296.1.1.

Reference: Section 404 Nationwide 13 and 33 Permit, Action ID 2012-00790 issued July 25, 2013.
Section 401 Water Quality Certification, DWQ No. 13-0718, issued July 23, 2013.

Dear Madam:

The proposed structure for the above referenced project has been changed from a two-span to a single-span bridge. Due to this design revision, the amount of stream bank stabilization at the outlet of the base ditch has been reduced from 8 to 7 linear feet.

A request to modify the above-referenced permits due to a substantial increase in stream bank stabilization was submitted on September 16, 2013 and a 401 Certification modification was issued on September 19, 2013. However, this modification request was rescinded due to the changes in bridge design resulting in impacts nearly identical to the original permitted design.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-707-6000
FAX: 919-212-5785
WEBSITE:NCDOT.GOV

LOCATION:
CENTURY CENTER, BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

All other impacts remain as stated in the July 10, 2013 application and subsequent permits. The stream and wetland impacts for this project do not constitute loss of waters and do not require mitigation. Please see enclosed revised stormwater management plan, permit drawings and design sheets.

A copy of this permit modification request and its distribution list will be posted on the NCDOT Website at: http://connect.ncdot.gov/resources/Environmental/Pages. If you have any questions or need additional information, please call Erin Cheely at (919) 707-6108.

Sincerely,

E. L. Lusk

for Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis Unit

cc:
NCDOT Permit Application Standard Distribution List

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released September 2011)

Project/TIP No.: 42296.1.1 B-5137 **County(ies):** Stanly

General Project Information

Project No.:	42296.1.1 B-5137		**Project Type:**	Bridge Replacement		**Date:**	3/28/2013
NCDOT Contact:	Galen Cail		**Contractor / Designer:**				
Address:	1020 Birch Ridge Dr. Raleigh, NC 27610		**Address:**				
Phone:	919.707.6711		**Phone:**				
Email:	gcail@ncdot.gov		**Email:**				
City/Town:	Albemarle		**County(ies):**	Stanly			
River Basin(s):	Yadkin-Pee Dee		**CAMA County?**	No			
Primary Receiving Water:	Mountain Creek		**NCDWQ Stream Index No.:**	13-5-(0.7)			
NCDWQ Surface Water Classification for Primary Receiving Water		**Primary:**	Water Supply IV (WS-IV)	Class C			
		Supplemental:	None				
Other Stream Classification:	None						
303(d) Impairments:	None						
Buffer Rules in Effect	N/A						

Project Description

Project Length (lin. Miles or feet):	500 ft.	**Surrounding Land Use:**	Residental	
	Proposed Project		**Existing Site**	
Project Built-Upon Area (ac.)	0.27	ac.	0.25	ac.
Typical Cross Section Description:	2-12' lanes with 6' shoulders (4' paved) Bridge will be 2-12' lanes with 4.9' shoulders		2-10' lanes, 2' shoulder width. Bridge 10' lanes with 1' shoulders.	
Average Daily Traffic (veh/hr/day):	Design/Future:	2300/2300	Existing:	1500(2012)

General Project Narrative:

The project consists of replacing Bridge #215 on SR 1542 (Ridge Rd.) over Mountain Creek. The approach work will consist of raising the existing roadway grade and providing grass shoulders and guardrails. Bridge #215 existing 1 span structure (46' total length) will be replaced with a 1 span (1 @ 80' -- Box Beam bridge).

Best Management Practices:
-Promotion of sheet flow and infiltration with grass shoulders.
-Drainage systems outlet to rip rap pad.
-Removal of existing road fill under bridge will improve bridge conveyance and reduce the bridge opening velocities.

Revised 10/9/13

References

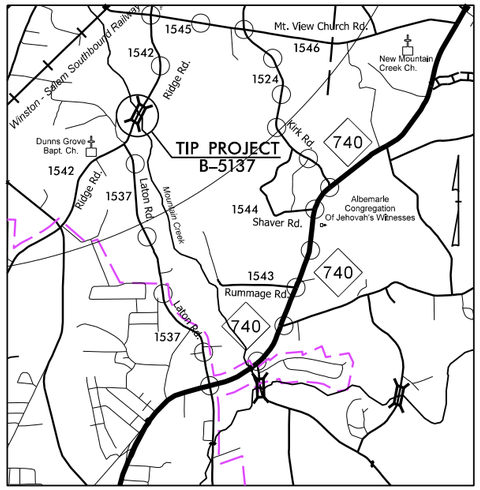
09/08/99

TIP PROJECT: B-5137

CONTRACT:

$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

See Sheet 1-A For Index of Sheets



OFFSITE DETOUR

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STANLY COUNTY

LOCATION: REPLACE BRIDGE NO. 215 OVER MOUNTAIN CREEK ON SR 1542 (RIDGE RD.)

TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURE

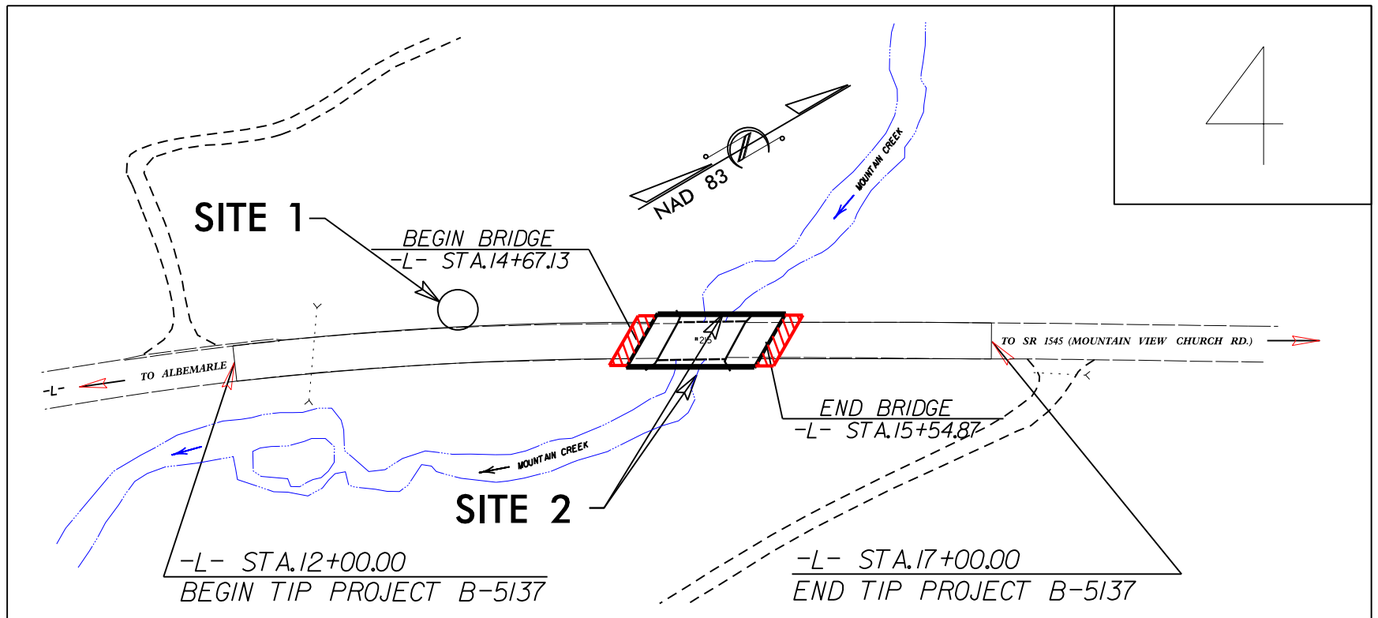
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5137	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
42296.1.1	BRZ-1542(7)	P.E.
42296.2.1	BRZ-1542(7)	R/W & UTIL.

PERMIT DRAWING SHEET 1 OF 7

Revised 10/9/13

WETLAND AND SURFACE WATER IMPACTS PERMIT



4

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2012 = 1504
ADT 2035 = 2300
DHV = 60 %
D = 10 %
T = 5 % *
V = 50 MPH
* TTST =1% DUAL 4%
FUNC CLASS =
RURAL COLLECTOR
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-5137 = 0.079 MILES

LENGTH OF STRUCTURE TIP PROJECT B-5137 = 0.016 MILES

TOTAL LENGTH OF TIP PROJECT B-5137 = 0.095 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
AUGUST 17, 2012

LETTING DATE:
OCTOBER 15, 2013

G. E. BREW, PE
PROJECT ENGINEER

W. T. BEST
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

PROJECT REFERENCE NO.	SHEET NO.
B-5137	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

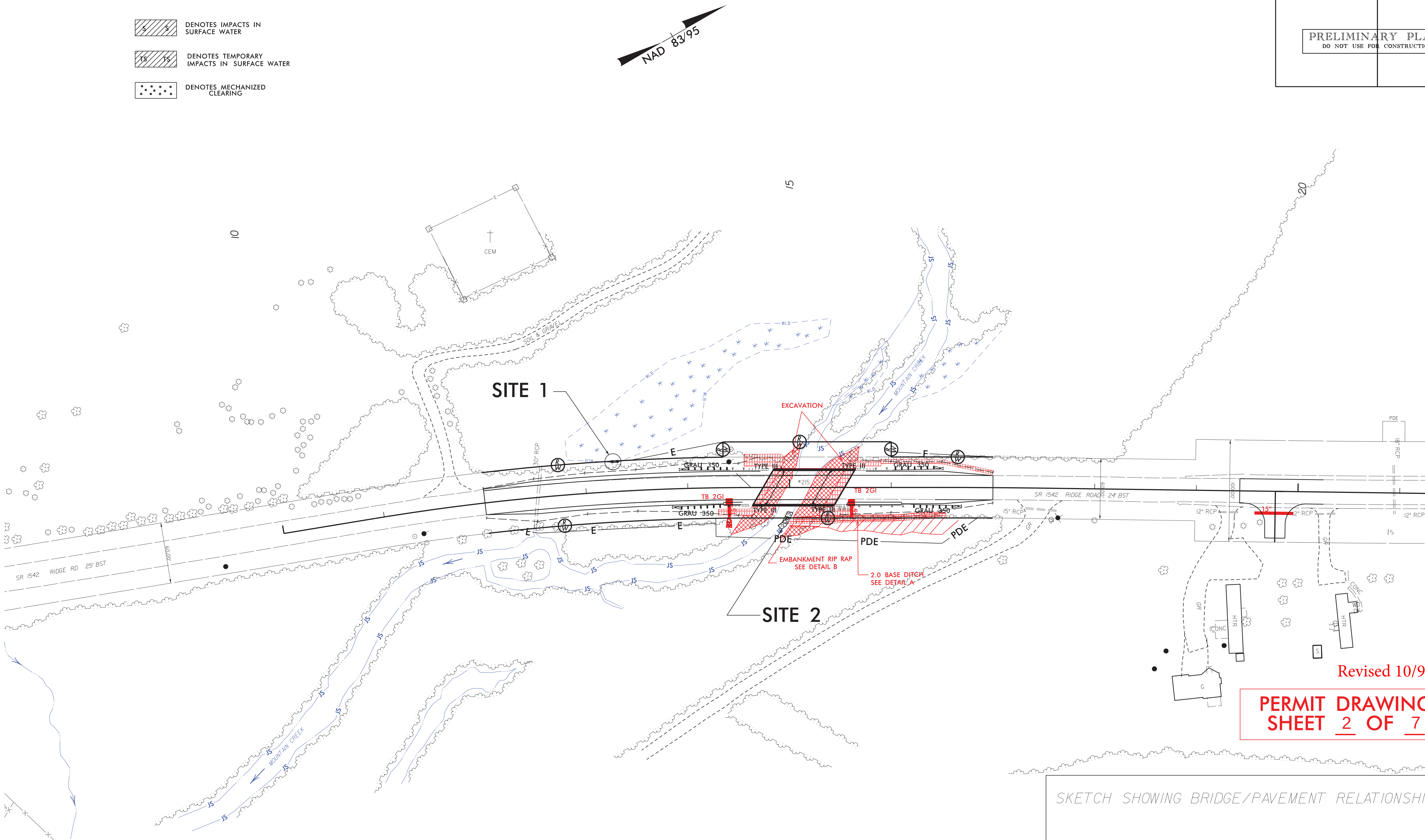
R/W Rev.: Corrected offset distance for proposed R/W Lt. and Rt. of Sta. 17+00.00 -L- WTB 11/29/12

8/17/99

DENOTES IMPACTS IN SURFACE WATER

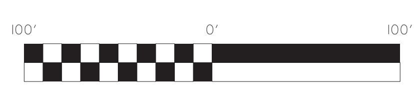
DENOTES TEMPORARY IMPACTS IN SURFACE WATER

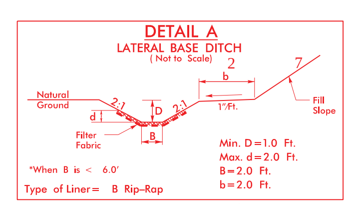
DENOTES MECHANIZED CLEARING

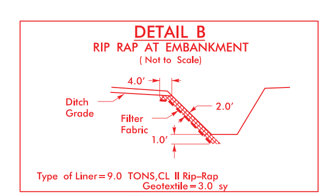


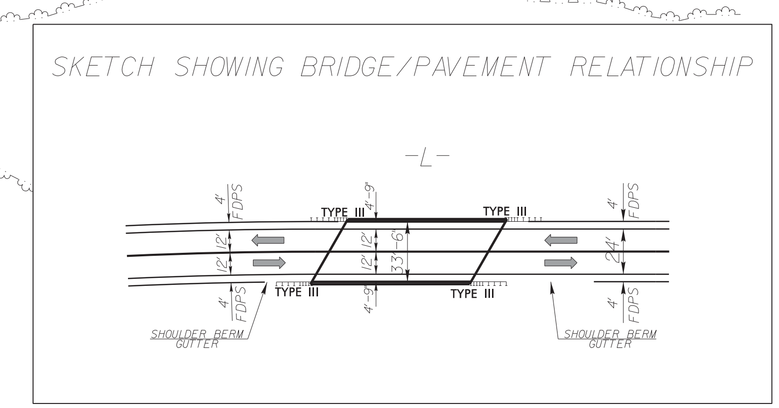
Revised 10/9/13

PERMIT DRAWING
SHEET 2 OF 7









4/2/2013
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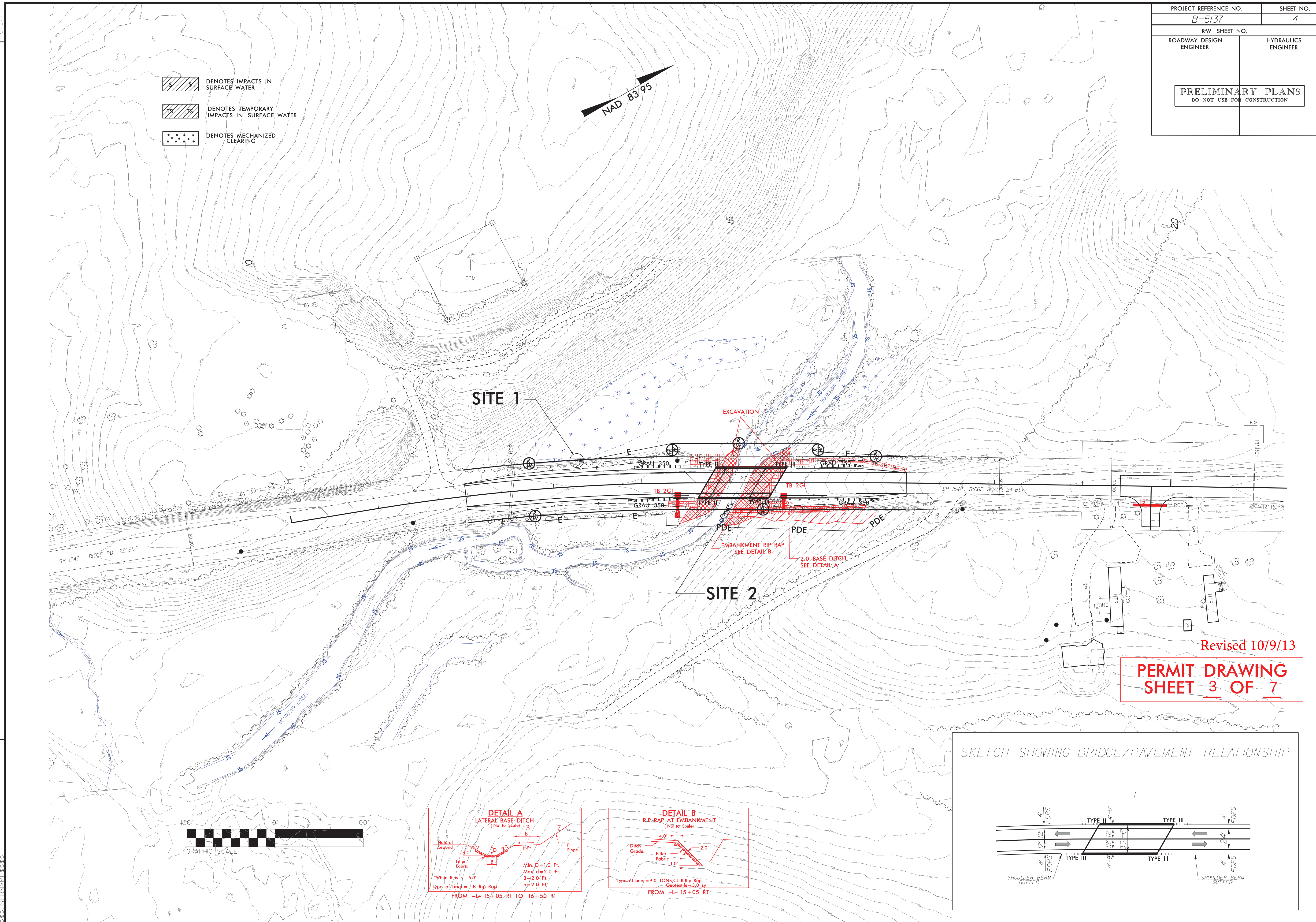
$$$$USERNAME$$$$



PROJECT REFERENCE NO.
B-5137
SHEET NO.
4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES MECHANIZED CLEARING
NAD 83/95
CEM
SITE 1
SITE 2
EXCAVATION
TYPE III
GRAU 350
TB 2GI
PDE
EMBANKMENT RIP RAP SEE DETAIL B
2.0' BASE DITCH SEE DETAIL A
SR 1542 RIDGE ROAD 24' BST
SR 1542 RIDGE RD 25' BST
MOUNTAIN CREEK
Revised 10/9/13
PERMIT DRAWING
SHEET 3 OF 7
SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP
-L-
SHOULDER BERM GUTTER
GRAPHIC SCALE
DETAIL A
LATERAL BASE DITCH
(Not to Scale)
Natural Ground
Filter Fabric
Fill Slope
Min. D=1.0 Ft
Max d=2.0 Ft
B=2.0 Ft
b=2.0 Ft
Type of Liner = B Rip-Rap
FROM -L- 15+05 RT TO 16+50 RT
DETAIL B
RIP RAP AT EMBANKMENT
(Not to Scale)
Ditch Grade
Filter Fabric
Type of Liner = 9.0 TONS CL B Rip-Rap
Geotextile = 3.0 sy
FROM -L- 15+05 RT

REVISIONS

R/W Rev: Corrected offset distance for proposed R/W Lt. and Rt. of Sta. 17+00.00 -L- WTB 11/29/12

8/17/99

4/2/2013
lddawson
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PROJECT REFERENCE NO.	SHEET NO.
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

CEM

SOIL & GRAVEL

WLB

SITE 1

30" RCP

E

R/W

GRAU 350

TYPE III

#215

EXCAVATION

JS

MOUNTAIN CREEK

SR 1542 RIDGE ROAD 24' BST

15" RCP

GR

PDE

EMBANKMENT RIP RAP
SEE DETAIL B

2.0 BASE DITCH
SEE DETAIL A

SITE 2

TS

S S — DENOTES IMPACTS IN SURFACE WATER

TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES MECHANIZED CLEARING

50' 0' 50'
GRAPHIC SCALE

Revised 10/9/13

PERMIT DRAWING
SHEET 4 OF 7

4/2/2013
ldclawson
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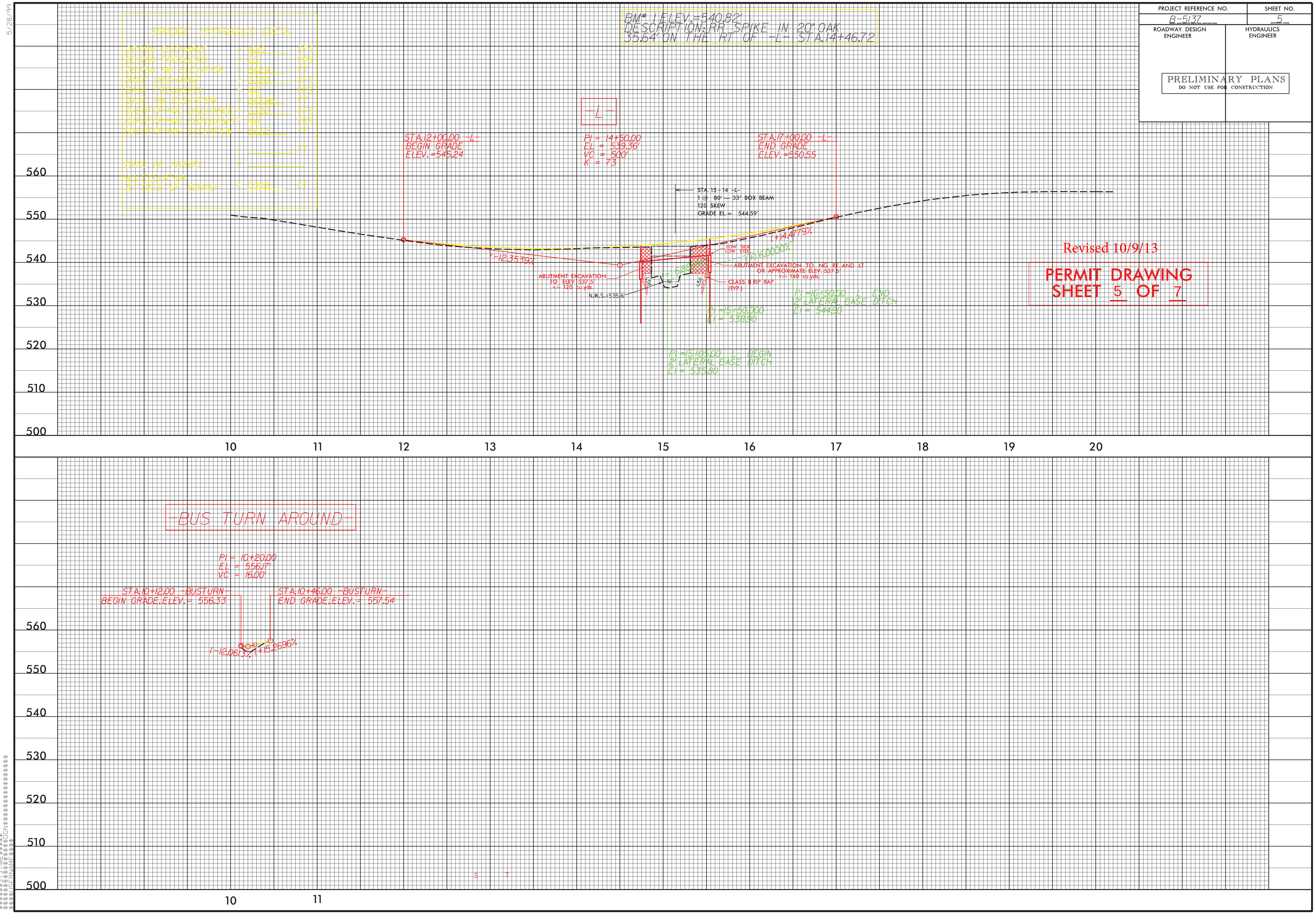
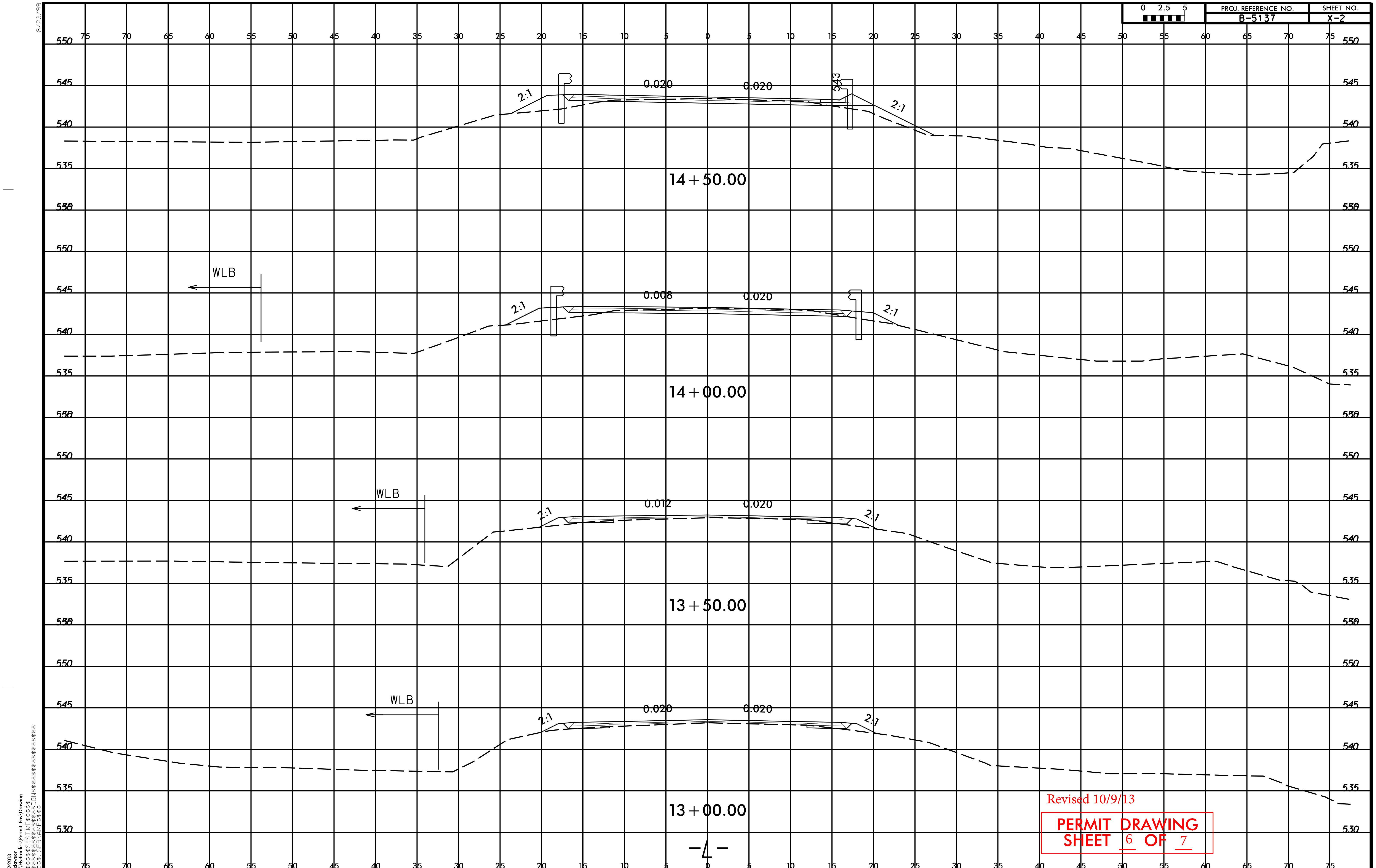


PROJECT REFERENCE NO.
B-5137
SHEET NO.
5
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
BRIDGE HYDRAULIC DATA
DESIGN DISCHARGE = 1620 CFS
DESIGN FREQUENCY = 25 YRS
DESIGN HW ELEVATION = 542.4 FT
BASE DISCHARGE = 2320 CFS
BASE FREQUENCY = 100 YRS
BASE HW ELEVATION = 543.46 FT
OVERTOPPING DISCHARGE = 2320 CFS
OVERTOPPING FREQUENCY = 100 YRS
OVERTOPPING ELEVATION = 543.3 FT
= FT
DATE OF SURVEY =
W.S. ELEVATION AT DATE OF SURVEY = 535.6 FT
BM# 1 ELEV.=540.82'
DESCRIPTION: RR SPIKE IN 20" OAK
35.64' ON THE RT OF -L- STA.14+46.72
-L-
STA.12+00.00 -L-
BEGIN GRADE
ELEV.=545.24
PI = 14+50.00
EL = 539.36'
VC = 500'
K = 73
STA.17+00.00 -L-
END GRADE
ELEV.=550.55
STA. 15+14 -L-
1 @ 80' — 33" BOX BEAM
120 SKEW
GRADE EL.= 544.59'
(-)2.3539%
(+)4.4779%
(+) 6.0000%
(+) 6.8889%
LOW SIDE
LOW STEEL
ABUTMENT EXCAVATION TO ELEV 537.5' +/- 120 cu.yds.
ABUTMENT EXCAVATION TO NG RT. AND LT OR APPROXIMATE ELEV. 537.5' +/- 140 cu.yds.
CLASS II RIP RAP (TYP.)
N.W.S.=535.6'
1.5:1
PI =15+50.000
EI = 538.90
PI =16+50.00 -L- END
2' LATERAL BASE DITCH
EI = 544.90
PI =15+05.00 -L- BEGIN
2' LATERAL BASE DITCH
EI = 535.80
Revised 10/9/13
PERMIT DRAWING
SHEET 5 OF 7
560
550
540
530
520
510
500
10
11
12
13
14
15
16
17
18
19
20
-BUS TURN AROUND-
PI = 10+20.00
EL = 556.17'
VC = 16.00'
STA.10+12.00 -BUSTURN-
BEGIN GRADE.ELEV.= 556.33
STA.10+46.00 -BUSTURN-
END GRADE.ELEV.= 557.54
(-)2.0613%
(+)5.2696%


PROJ. REFERENCE NO.
B-5137
SHEET NO.
X-2
0 2.5 5
14 + 50.00
14 + 00.00
13 + 50.00
13 + 00.00
0.020
0.008
0.012
2:1
543
WLB
Revised 10/9/13
PERMIT DRAWING
SHEET 6 OF 7
8/23/99
4/2/2013
ldclawson
R:\Hydraulics\Permit_Env\Drawing

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	13+30 Lt.	Fill				<.01						
2	15+00 Rt.	Bank Stabilization						<.01	<.01	7	10	
TOTALS:						<.01		<.01	<.01	7	10	

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

COUNTY

WBS - 42296.1.1 (B-5137)

Revised 10/9/13

SHEET 7 of 7 10/9/2013

ATN Revised 3/31/05

PROJECT REFERENCE NO.	SHEET NO.
B-5137	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Revised 10/16/13

REVISIONS

8/17/99 R/W Rev.: Corrected offset distance for proposed R/W Lt. and Rt. of Sta. 17+00.00 -L-. WTB 11/29/12

16-OCT-2013 07:35
R:\Roadway\Projects\B-5137_Rdy_psh.dgn
\\\\\ USER NAME = \\\\\

NAD 83/95

-L-
PI Sta 12+77.18
Δ = 9° 21' 31.0" (RT)
D = 2° 31' 26.6"
L = 370.78'
T = 185.80'
R = 2,270.00'

-L-
PI Sta 16+99.48
Δ = 0° 48' 42.0" (RT)
D = 0° 42' 58.3"
L = 113.33'
T = 56.67'
R = 8,000.00'

BEGIN TIP PROJECT B-5137
-L- STA. 12+00.00

POT Sta. 10+00.00

PC Sta. 10+91.38

BEGIN APPROACH SLAB
-L- STA. 14+62.08

BEGIN BRIDGE
-L- STA. 14+73.13

PT Sta. 14+62.16

END BRIDGE
-L- STA. 15+54.87

END APPROACH SLAB
-L- STA. 15+65.72

PC Sta. 16+42.81

END TIP PROJECT B-5137
-L- STA. 17+00.00

PT Sta. 17+56.14

POT Sta. 19+77.73 -L- =
POT Sta. 10+00.00 BUSTURN

POT Sta. 10+50.00 BUSTURN
END CONSTRUCTION

BEGIN SBG
STA. 14+35-L-

END SBG
STA. 16+10-L-

EMBANKMENT RIP RAP
± 62.3Ω DETAIL B

2.0 BASE DITCH
SEE DETAIL A

CL B RIP RAP
1.0 TONS
5 S.Y. GEOTEXTILE

50' TAPER RT & LT

SEE DETAIL C

NO U/G UTILITIES FOUND WITHIN PROJECT LIMITS

SR 1542 RIDGE RD 25' BST

SR 1542 RIDGE ROAD 24' BST

EXISTING R/W

GRANITE MONUMENT

CEM

NALIN C. MEHTA
SUSAN W. MEHTA
DB 1190 PG 731

DOUGLAS W. TALBERT
ELIZABETH C. TALBERT
DB 988 PG 324

RUBY M. ALMOND, ESTATE
DB 345 PG 628

RUBY M. ALMOND, ESTATE
DB 366 PG 556

WENDY DAWN TURNER
DB 858 PG 162

COURTNEY G. BURNSIDE &
BRIAN C. BURNSIDE
DB 1387 PG 928

HORNET'S NEST GRL SCOUT COUNCIL INC.
USES THIS ROAD TO ACCESS THEIR PROPERTY

MOUNTAIN CREEK

DETAIL A
LATERAL BASE DITCH
(Not to Scale)

Natural Ground, 2:1, d, B, 2:1, b, 1'Ft., Fill Slope, Filter Fabric

*When B is < 6.0'
Type of Liner = B Rip-Rap
Min. D=1.0 Ft.
Max. d=2.0 Ft.
B=2.0 Ft.
b=2.0 Ft.

FROM -L- 15+05 RT TO 16+50 RT

DETAIL B
RIP RAP AT EMBANKMENT
(Not to Scale)

4.0', Ditch Grade, Filter Fabric, 2.0', 1.0'

Type of Liner = 9.0 TONS, CL II Rip-Rap
Geotextile = 3.0 sy

FROM -L- 15+05 RT

DETAIL C
TOE PROTECTION
(Not to Scale)

Natural Ground, b, 2:1 or Flatter Fill Slope, d, Filter Fabric

d=2.0 Ft.
b=2.0 Ft.
Type of Liner = Class B Rip-Rap

FROM -L- 15+90 LT TO 17+00 LT

SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

-L-

4" FDPS, TYPE III, 4%, 12', 12', 33', 6%, 24', 4" FDPS, SHOULDER BERM GUTTER

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
B-5137	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Revised 10/16/13

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 1620	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 542.4	FT
BASE DISCHARGE	= 2320	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 543.46	FT
OVERTOPPING DISCHARGE	= 2320	CFS
OVERTOPPING FREQUENCY	= 100	YRS
OVERTOPPING ELEVATION	= 543.3	FT
	=	FT
DATE OF SURVEY	=	
W.S. ELEVATION AT DATE OF SURVEY	= 535.6	FT

BM# 1 ELEV.=540.82'
DESCRIPTION: RR SPIKE IN 20" OAK
35.64' ON THE RT OF -L- STA.14+46.72

-L-

STA.12+00.00 -L-
BEGIN GRADE
ELEV.=545.24

PI = 14+50.00
EL = 539.36'
VC = 500'
K = 73

STA.17+00.00 -L-
END GRADE
ELEV.=550.55

STA.13+14 -L-
80' - 33" BOX BEAM
120° SKEW
GRADE EL = 544.59'

-12.35392%

+14.47794%

+16.00050%

LOW SIDE
(LOW) STEEL

ABUTMENT EXCAVATION
TO ELEV 537.5
1/2 120 cu.yds

L (+)68

N.W.S.=535.6

ABUTMENT EXCAVATION TO NG RT AND LT
OR APPROXIMATE ELEV 537.5
= 140 cu.yds

CLASS II RIP RAP
(TYP.)

PI =16+50.00 -L- END
2' LATERAL BASE DITCH
EL = 544.50

PI =15+50.000
EL = 538.90

THEORETICAL OVERTOPPING SCOUR

PI =15+05.00 -L- BEGIN
2' LATERAL BASE DITCH
EL = 535.80

10 11 12 13 14 15 16 17 18 19 20

560 550 540 530 520 510 500

-BUS TURN AROUND-

PI = 10+20.00
EL = 556.17'
VC = 16.00'

STA.10+12.00 -BUSTURN-
BEGIN GRADE.ELEV.= 556.33

STA.10+46.00 -BUSTURN-
END GRADE.ELEV.= 557.54

(-12.06152

+15.26996

10 11

560 550 540 530 520 510 500

16-OCT-2013 07:37
R:\Roadway_P...\B-5137_Rdy_pf1.dgn
$$$$USERNAME$$$$