

CONTRACT: C201838 ID: B-3803

CONTENTS

LINE	STATION	SHEET NUMBERS		
		PLAN	EARTHWORK	XSECT
-L-	10+50.00 to 23+75.00	3	3A	5,6,7 & 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 GEOTECHNICAL ENGINEERING UNIT

**ROADWAY
 SUBSURFACE INVESTIGATION**

PROJ. REFERENCE NO. B-3803 F.A. PROJ. BRZ-1169(2)
 COUNTY ASHE
 PROJECT DESCRIPTION APPROACHES TO BRIDGE NO. 334 OVER
 SOUTH FORK OF THE NEW RIVER ON SR 1169
INVENTORY

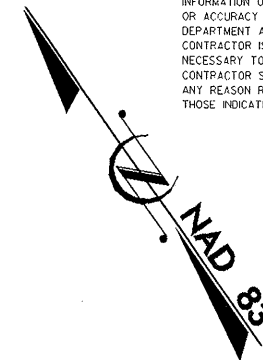
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3803	1	8
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33259.1.1	BRZ-1169(2)	PE	
33259.2.1	BRZ-1169(2)	RW, UTIL.	
33259.3.1	BRZ-1169(2)	CONST.	

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING, AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE PART OF THE CONTRACT.

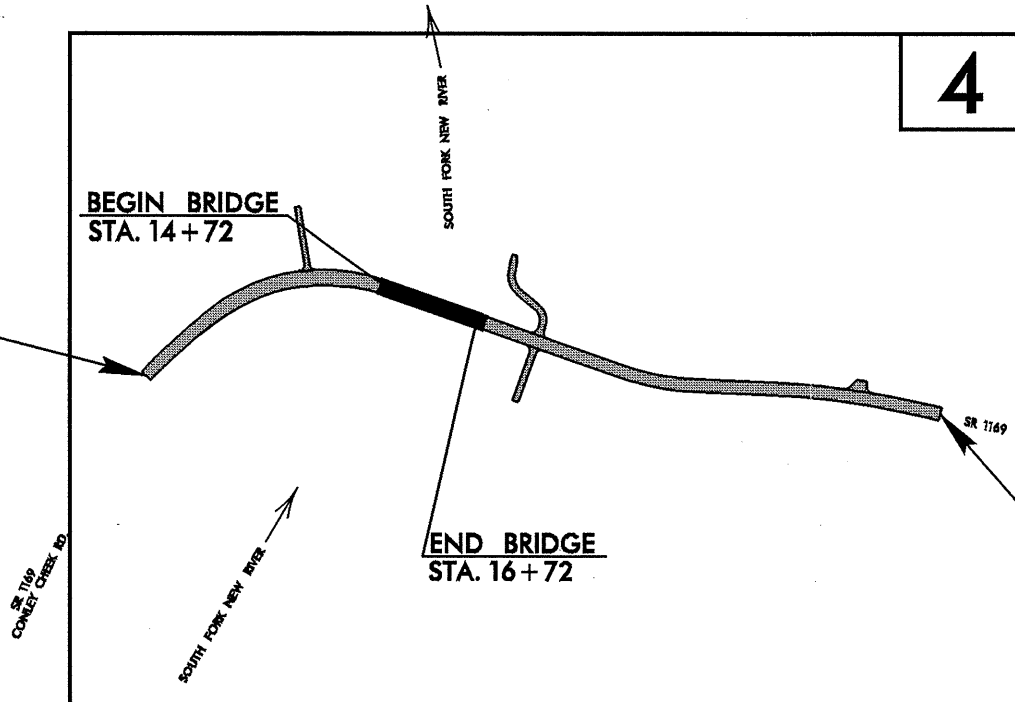
GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION, AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE, DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.



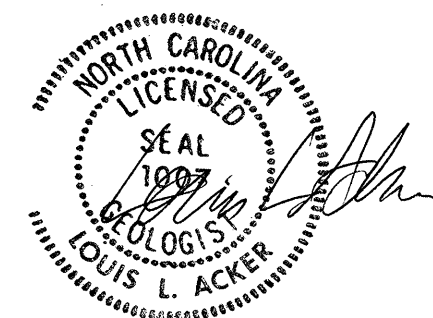
TO YATESR 1003

BEGIN PROJECT B-3803
-L- STA 10+50.00



END PROJECT B-3803
-L- STA 23+75.00

INVESTIGATED BY LL ACKER
 CHECKED BY W.D. FRYE
 SUBMITTED BY W.D. FRYE
 DATE 11/01/05



DRAWN BY: J.T. WILLIAMS

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N.C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IT IS CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - BY HAVING REQUESTED THIS INFORMATION THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Main content area containing tables for SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, TERMS AND DEFINITIONS, SOIL LEGEND AND AASHTO CLASSIFICATION, MINERALOGICAL COMPOSITION, COMPRESSIBILITY, PERCENTAGE OF MATERIAL, GROUND WATER, MISCELLANEOUS SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, and FRACTURE SPACING/BEDDING/INDURATION.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

November 1, 2005

STATE PROJECT: 33259.1.1 (B-3803)
F. A. PROJECT: BRZ-1169(2)
COUNTY: Ashe

DESCRIPTION: Approaches to Bridge No. 334 over South Fork New River
on SR 1169 (Conley Creek Road)

SUBJECT: Geotechnical Report - Inventory

Site Description

This project is located in the southern part of Ashe County, approximately 15 miles from the town of West Jefferson and one mile north of the intersection of SR 1169 and SR 1003 (Idlewild Road). SR 1169 crosses the South Fork of the New River on a one-lane, low water bridge. The river at the site is approximately 100 feet wide flowing on a bed of hard rock and gravel, in a flood plain more than 600 feet wide, most of which lies on the west side of the river. A small stream with a narrow floodplain lies along the south side of SR 1169 on the east bank of the river. The road on the east side of the river is cut into the base of a hill.

Plans call for widening the approaches and for construction of a new bridge on alignment -L-, at an angle to the Centerline of the existing bridge and up to 25 feet Right. Construction will involve a Left Side cut approximately 15 feet deep where an existing cut bank is to be extended into the hill slope. Proposed fills are not more than 10 feet high over the floodplain on the approaches.

The Geotechnical Engineering Unit made a reconnaissance of the site on October 3 and October 12, 2005. Special attention was paid to the area of the proposed cut. Materials exposed in the existing cut were identified and were further investigated by digging into the cut slope with a spade. Strike and dip of the rock foliation was noted.

MAILING ADDRESS:
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RALEIGH NC 27699-1589

TELEPHONE: 919-250-4088
FAX: 919-250-4237

WEBSITE: WWW.DOH.DOT.STATE.NC.US

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

Items of Special Geotechnical Interest

Hard Rock in Cut

Hard rock will be encountered in the Left Side cut on -L- between Station 19+00 and 21+50. The hard rock line is approximately five feet below natural ground from Station 19+00 to Station 20+00, and it descends from there to about 10 feet below natural ground at Station 21+00. The hard rock is overlain by weathered rock and micaceous, sandy saprolite. The lithology is moderately hard mica schist with some hard layers of mica gneiss. The rock appears to be only moderately weathered around Station 19+00, but it is progressively more thoroughly weathered in the up station direction. The foliation dips 35 to 50 degrees southeast, almost perpendicular to the cut face.

Soil and Rock Materials

This site lies on the Yadkin River floodplain. Most soils to be encountered in construction are alluvial flood plain soils. There has been no investigation of those materials other than some shallow excavations with a hand spade. Both sandy and silty alluvial soils were found.

Residual saprolite, weathered rock and hard rock are exposed on the Left Side of -L- from about Station 18+50 to Station 22+00, and it can be assumed that those materials underlie the Right Side as well in that area at least as far as Station 21+00. The saprolite is moist, micaceous silty sand. The rock at this site is well foliated, mica schist with layers of mica gneiss.

Respectfully submitted,

Louis L. Acker, LG
Project Geologist

EARTHWORK BALANCE SHEET

PROJECT <u>B-3803</u>		COUNTY <u>ASHE</u>					COMPUTED BY: <u>BCF 7/10/07</u>		CHECKED BY: <u>GIL 12/18/07</u>		SHEET <u>1</u> OF <u>1</u>			
STATION	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT EXCAV.	UNSUIT. EXCAV.	SUITABLE EARTH EXCAV.	TOTAL EMB.	ROCK EMB.	EARTH EMB.	EMB. + 15 %	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
-L-														
10+50.00	BEGIN BRIDGE 14+72.00	25	0	0	0	25	1,351	0	1,351	1,554	1,529	0	0	0
-DRIVE1-														
10+10.03	10+70.00	0	0	0	0	0	57	0	57	66	66	0	0	0
SUBTOTAL:		25	0	0	0	25	1,408	0	1,408	1,620	1,595	0	0	0
-L-														
END BRIDGE 16+72.00	23+75.00	2,002	723	0	0	1279	1,094	723	263	1,025	0	977	0	977
-DRIVE2-														
10+10.00	11+09.01	2	0	0	0	2	207	0	207	230	228	0	0	0
-DRIVE3-														
10+10.00	11+17.18	46	0	0	0	46	197	0	197	227	181	0	0	0
SUBTOTAL:		2,050	723	0	0	1,327	1,498	723	663	1,482	409	977	0	977
PROJECT SUBTOTAL:		2,075	723	0	0	1,352	2,906	723	2,071	3,102	2,004	977	0	977
ADDITIONAL UNDERCUT		0	0	300	0	0	300	0	300	345	345	300	0	300
PROJECT TOTAL:		2,075	723	300	0	1,352	3,206	723	2,371	3,447	2,349	1,277	0	1,277
WASTE IN LIEU OF BORROW		0	0	0	0	0	0	0	0	0	-1,277	-1,277	0	-1,277
LOSS DUE TO CLEARING & GRUBBING		-200	0	0	0	-200	0	0	0	0	+200	0	0	0
ESTIMATED 5% TO REPLACE TOPSOIL IN BORROW PIT		0	0	0	0	0	0	0	0	0	64	0	0	0
GRAND TOTAL:		1,875	723	300	0	1,152	3,206	723	2,371	3,447	1,336	0	0	0
SAY:		1,900									1,350			

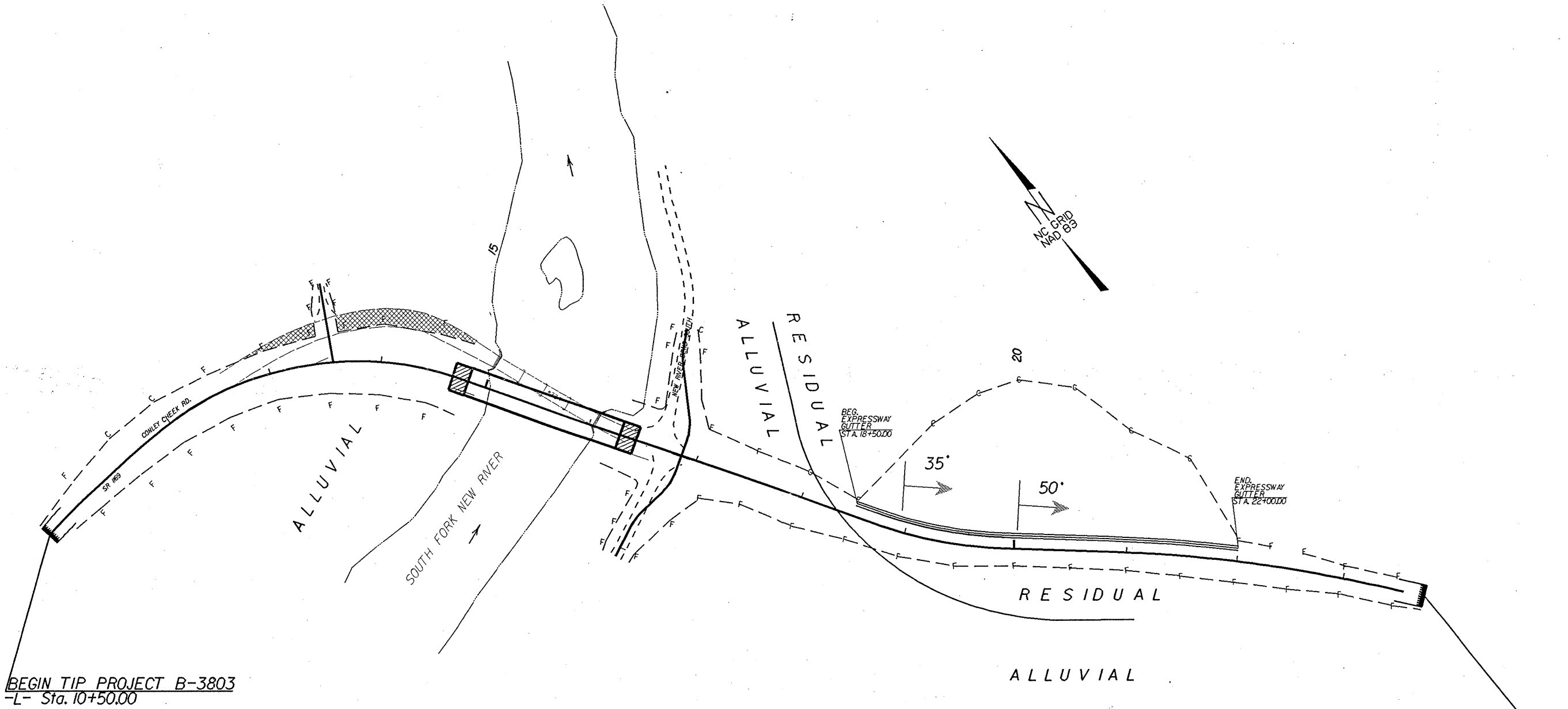
GEOTECH REC'S FABRIC for SOIL STABILIZATION = 500 SY
 UNDERDRAIN = 300 FT
 UNDERCUT = 300 CY
 SELECT GRANULAR MATERIAL, CLASS II OR III = 500 TONS
 SELECT GRANULAR MATERIAL, CLASS IV = 600 CY

"EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT."

Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Shoulder Borrow, Fine Grading, Clearing and Grubbing, Breaking of Existing Pavement, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

PROJECT REFERENCE NO. B-3803	SHEET NO. 4 OF 8
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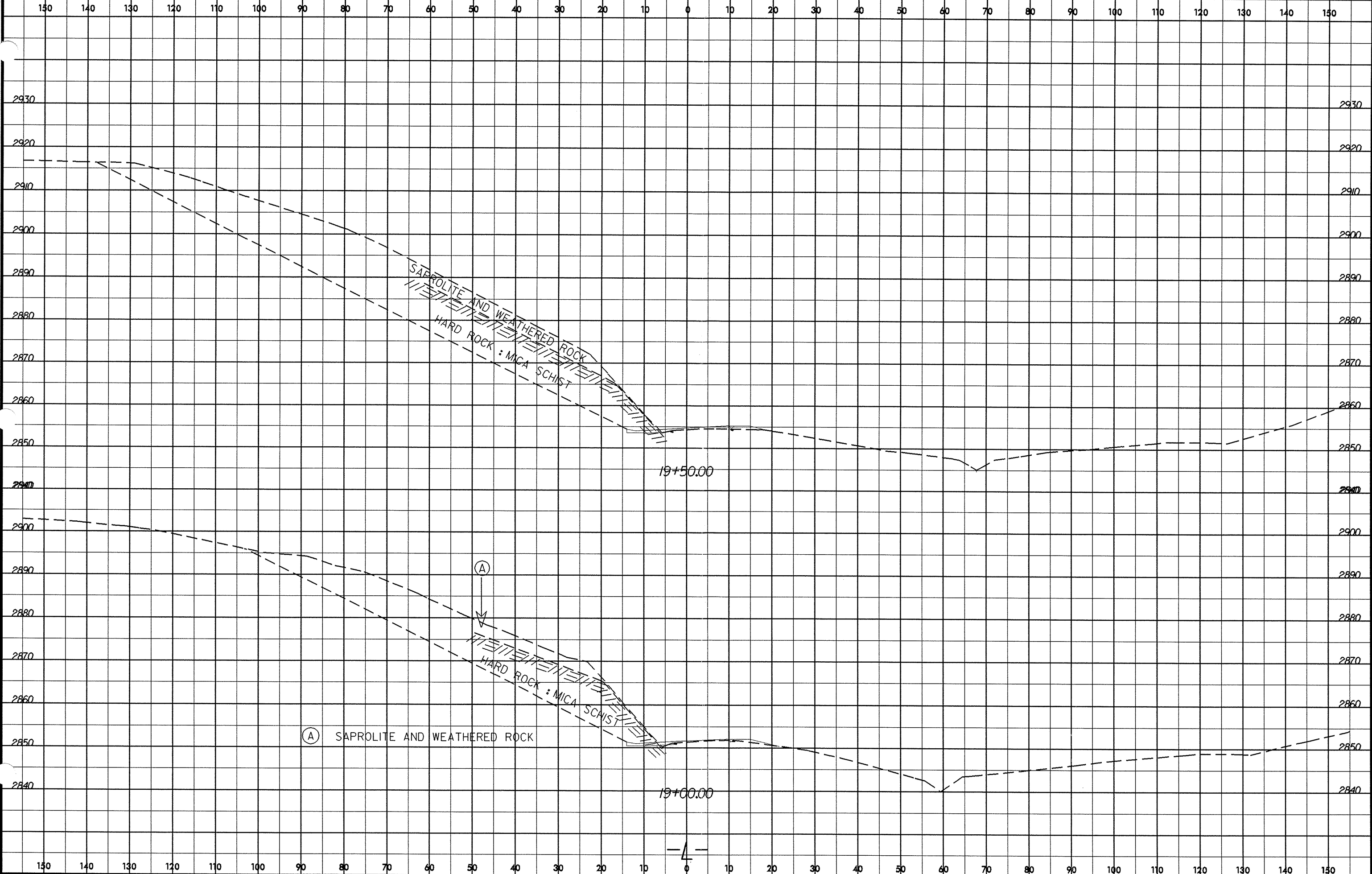
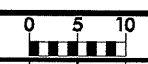
PLAN VIEW



BEGIN TIP PROJECT B-3803
-L- Sta. 10+50.00

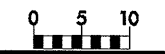
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-L- Sta. 23+75.00

8/23/99



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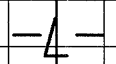
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(A) HARD ROCK : MICA SCHIST

SAPROLITE AND WEATHERED ROCK

20+00.00

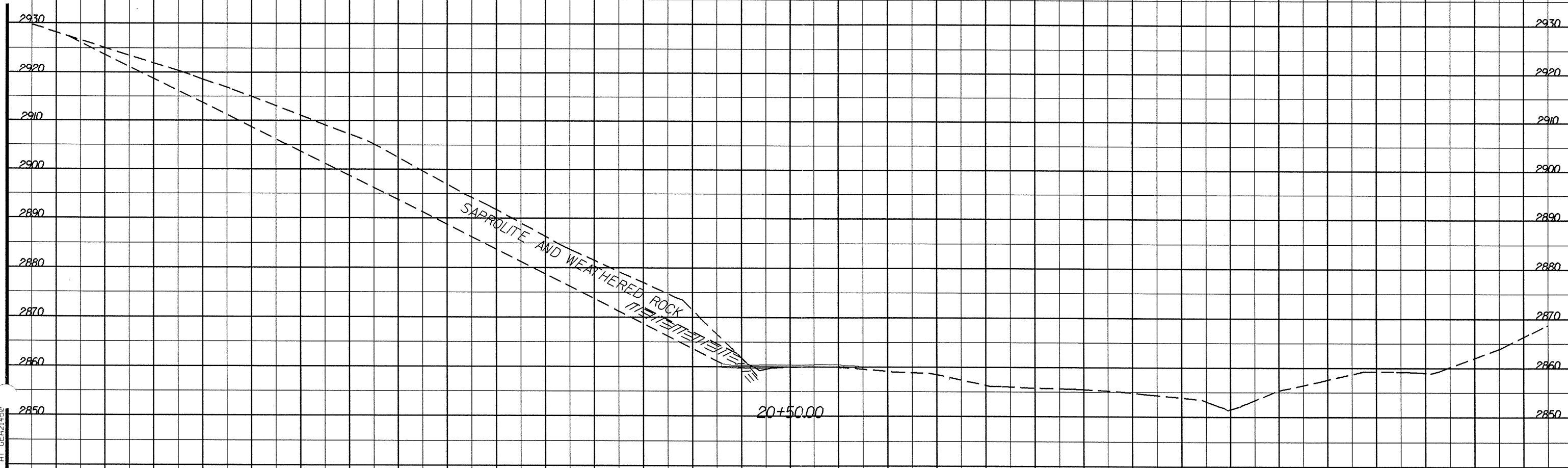


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Project: 3803
Sheet: 7 of 8



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