STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TYPPETT
SECRETARY

February 12, 2008

U.S. Army Corps of Engineers
Regulatory Field Office
Post Office Box 1000
Washington, NC 27889-1000

Attn: Mr. William Wescott
NCDOT Coordinator

Dear Sir:

Subject: **Application for Permit Modification to the Section 404 Individual Permit and Section 401 Water Quality Certification** for Construction of extension of NC 43 from south of NC 55 to north of US 17. Craven County. State Project No. 6.804857. TIP No. R-4463. Debit $570 from WBS 35601.1.1.

References: USACE 404 Individual Permit Action ID 2007-02231-125, issued November 19, 2007.
NCDWQ 401 Water Quality Certification No. 3673, issued September 21, 2007.
NCDCM Consistency Concurrence CD07-100, issued October 3, 2007

The purpose of this letter is to request a modification to the US Army Corps of Engineers (USACE) Section 404 Individual Permit and NC Division of Water Quality (NCDWQ) Section 401 Water Quality Certification. The North Carolina Department of Transportation (NCDOT) is currently constructing the extension of NC 43 from NC 55 to US 17. The project, located west of New Bern in Craven County, is referred to as the NC 43 Connector (Bosch Boulevard) and is approximately 4.5 miles in length. A Section 404 Permit (Action ID 2007-02231-125) was issued on November 19, 2007 and Water Quality Certification issued (WQC No. 3673) on September 21, 2007. The project has been split into two sections, Section A and Section B. Section B has been let and construction has begun.

This modification request is for additional permanent impacts of 0.13 acre of jurisdictional wetlands.

The revised design does not compromise NCDOT's compliance with the existing permit conditions. The revision has been evaluated for compliance with the avoidance/minimization criteria and is in compliance with all previous issues, including the following:

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

TELEPHONE: 919-715-1500
FAX: 919-715-1501

WEBSITE: WWW.NCDOT.ORG

LOCATION:
2728 CAPITAL BLVD
PLB SUITE 168
RALEIGH, NC 27604

- Protected Species
- Aquatic Life passage
- FEMA compliance
- Cultural Resources

Summary of Changes

Changes to original design have been made due to enlarging the railroad bridge opening per the railroad's request and adding a turn lane per a property owner request. The vertical profile change due to the railroad is –L- 171+50 – 205+58.15. The turn lane is –L- 225+00 – 232+00 LT.

Additional impacts to jurisdictional non-riverine wetlands are summarized in Table 1, as well as on sheets 7, 8, 10 and 11 of the attached revised permit drawings. Total additional permanent wetland impacts for the project are projected to be 0.13 acre. Temporary impacts to wetlands have not changed from what was authorized by the original permits.

Table 1. Additional Permanent Jurisdictional Impacts for R-4463B

Site	Station	Permanent Fill in Wetlands (ac)
1	-L- 181+20 to 182+76	0.03
2	-L- 194+70 to 195+12	0.01
3	-L- 225+02 to 231+13	0.09
	Total Additional Wetland Impacts:	**0.13**

Compensatory Wetland Mitigation

The necessary compensatory mitigation to offset unavoidable impacts to waters that are jurisdictional under the federal Clean Water Act will be provided by the NC Ecosystem Enhancement Program (EEP). Additional impacts to 0.13 acre of jurisdictional wetlands will be offset by compensatory mitigation provided by the EEP program. A copy of the EEP acceptance letter dated February 8, 2008 is included with this application.

Regulatory Approvals

Section 404: Application is hereby made for the modification to the Section 404 Individual Permit.

Section 401: Application is hereby made for the modification to the Section 401 Water Quality Certification. In compliance with Section 143-215.3D(e) of the NCAC, we will provide $570.00 to act as payment for processing the Section 401 Water Quality Certification modification application. We are providing five (5) copies of this application to the NCDWQ, for their review and approval.

CAMA: Under separate letter, NCDOT is providing the NC Division of Coastal Management with this information to revise the Consistency Concurrence if necessary.

If you have any questions or need additional information, please call Mr. Chris Manley, Environmental Specialist at 919-715-1487.

Sincerely,

for Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA Branch

cc:
W/attachment

Mr. Brian Wrenn, NCDWQ (5 Copies)
Mr. Travis Wilson, NCWRC
Ms. Kathy Matthews, USEPA
Mr. Ronald Mikulak, USEPA, Atlanta, GA
Mr. Clarence W. Coleman, P.E., FHWA
Mr. Gary Jordan, USFWS
Mr. Ron Sechler, NMFS
Mr. Michael Street, NCDMF
Mr. Steve Sollod, NCDCM
Mr. Keith Eason, NCDOT Alternative Delivery

W/o attachment (see website for attachments)

Mr. Steve Sollod, NCDCM
Mr. Steven Lane, NCDCM
Dr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. Victor Barbour, P.E., Project Services Unit
Mr. Mark Staley, Roadside Environmental
Mr. C. E. Lassiter, P.E., Div. 2 Engineer
Mr. Jay Johnson, Div. 2 Environmental Officer
Mr. Scott McLendon, USACE, Wilmington
Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Ms. Beth Harmon, EEP
Mr. Todd Jones, NCDOT External Audit Branch
Ms. Stacy Oberhausen, P.E., PDEA
Mr. Carl Goode, PE, HEU

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TYPPETT
SECRETARY

February 12, 2008

Mr. Stephen Lane
Division of Coastal Management
N.C. Department of Environment & Natural Resources
400 Commerce Avenue
Morehead City, NC 28557

Dear Sir:

Subject: **Revised Certification for DCM Consistency for the proposed** extension of NC 43 from south of NC 55 to north of US 17. Craven County. State Project No. 6.804857. TIP No. R-4463. USACE Action ID 200310789.

References: USACE 404 Individual Permit Action ID 2007-02231-125, issued November 19, 2007.
NCDWQ 401 Water Quality Certification No. 3673, issued September 21, 2007.
NCDCM Consistency Concurrence CD07-100, issued October 3, 2007

The purpose of this letter and information package is to request additional concurrence from the NC Division of Coastal Management (NCDCM) for the North Carolina Department of Transportation's (NCDOT) consistency certification for the above-mentioned project. The North Carolina Department of Transportation (NCDOT) is currently constructing the extension of NC 43 from NC 55 to US 17. The project, located west of New Bern in Craven County, is referred to as the NC 43 Connector (Bosch Boulevard) and is approximately 4.5 miles in length. A Section 404 Permit (Action ID 2007-02231-125) was issued on November 19, 2007 and Water Quality Certification issued (WQC No. 3673) on September 21, 2007. The project has been split into two sections, Section A and Section B. Section B has been let and construction has begun.

This revised consistency concurrence is for additional permanent impacts of 0.13 acre of jurisdictional wetlands.

The revised design does not compromise NCDOT's compliance with the existing permit conditions. The revision has been evaluated for compliance with the avoidance/minimization criteria and is in compliance with all previous issues, including the following:

- Protected Species
- Aquatic Life passage
- FEMA compliance
- Cultural Resources

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

TELEPHONE: 919-715-1334
FAX: 919-715-5501

WEBSITE: WWW.NCDOT.ORG

LOCATION:
2728 CAPITAL BLVD
PLB SUITE 168
RALEIGH, NC 27604

Summary of Changes

Changes to original design have been made due to enlarging the railroad bridge opening per the railroad's request and adding a turn lane per a property owner request. The vertical profile change due to the railroad is –L- 171+50 – 205+58.15. The turn lane is –L- 225+00 – 232+00 LT.

Additional impacts to jurisdictional non-riverine wetlands are summarized in Table 1, as well as on sheets 7, 8, 10 and 11 of the attached revised permit drawings. Total additional permanent wetland impacts for the project are projected to be 0.13 acre. Temporary impacts to wetlands have not changed from what was authorized by the original permits.

Table 1. Additional Permanent Jurisdictional Impacts for R-4463B

Site	Station	Permanent Fill in Wetlands (ac)
1	-L- 181+20 to 182+76	0.03
2	-L- 194+70 to 195+12	0.01
3	-L- 225+02 to 231+13	0.09
	Total Additional Wetland Impacts:	**0.13**

Compensatory Wetland Mitigation

The necessary compensatory mitigation to offset unavoidable impacts to waters that are jurisdictional under the federal Clean Water Act will be provided by the NC Ecosytem Enhancement Program (EEP). Additional impacts to 0.13 ac of jurisdictional wetlands will be offset by compensatory mitigation provided by the EEP program. A copy of the EEP acceptance letter dated February 8, 2008 is included with this application.

Regulatory Approvals

Section 404: Under separate letter, NCDOT has requested a modification to the Section 404 Individual Permit from the USACE.

Section 401: Application Under separate letter, NCDOT has requested a modification to the Section 401 Water Quality Certification.

CAMA: The NCDOT certifies that these additional impacts comply with the enforceable policies of North Carolina's Coastal Management program and will be conducted in a manner consistent with such program. Therefore we are requesting a revised consistency concurrence if necessary, from NCDCM.

If you have any questions or need additional information please contact Chris Manley at (919) 715-1487 or cdmanley@dot.state.nc.us.

Sincerely,

for Gregory J. Thorpe, Ph.D., Environmental Management Director
Project Development & Environmental Analysis Branch

cc:
w/ attachments
Mr. Steve Sollod, NCDCM

w/o attachments
Mr. Keith Eason, NCDOT Alternative Delivery

Ecosystem Enhancement PROGRAM

RECEIVED
FEB 11 2008
DIVISION OF HIGHWAYS
PDEA-OFFICE OF NATURAL ENVIRONMENT

February 8, 2008

Mr. Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

R-4463, NC 43 Connector (Bosch Boulevard) from NC 55 to US 17 just west of New Bern, Craven County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the non-riparian mitigation for the subject project. Based on the information supplied by you on February 6, 2008, the impacts are located in CU 03020204 of the Neuse River Basin in the Southern Outer Coastal Plain (SOCP) Eco-Region, and are as follows:

Non-riparian Wetland Impacts: 4.55 acres

This mitigation acceptance letter replaces the mitigation acceptance letters dated January 31, 2006 and May 21, 2007. This project is included in the NCDOT's Design Build Program. EEP commits to implementing sufficient compensatory stream and riparian wetland mitigation to offset the impacts associated with this project by the end of the MOA Year in which this project is permitted, in accordance with Section X of the Amendment No. 2 to the Memorandum of Agreement between the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, fully executed on March 8, 2007. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

James B. Stanfill for

William D. Gilmore, P.E.
EEP Director

cc: Mr. William Wescott, USACE-Washington
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit
File: R-4463 Revised

Ecosystem Enhancement PROGRAM

February 8, 2008

Mr. William Wescott
U. S. Army Corps of Engineers
Washington Regulatory Field Office
Post Office Box 1000
Washington, North Carolina 27889-1000

Dear Mr. Wescott:

Subject: EEP Mitigation Acceptance Letter:

R-4463, NC 43 Connector (Bosch Boulevard) from NC 55 to US 17 just west of New Bern, Craven County; Neuse River Basin (Cataloging Unit 03020204); Northern Outer Coastal Plain (NICP) Eco-Region

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory non-riparian wetland mitigation for the unavoidable impact associated with the above referenced project. As indicated in the NCDOT's mitigation request dated February 6, 2008, the project will impact 4.55 acres of non-riparian wetlands.

This mitigation acceptance letter replaces the mitigation acceptance letters issued on January 31, 2006 and May 21, 2007. Compensatory non-riparian wetland mitigation associated with this project will be provided in accordance with Section X of the Amendment No. 2 to the Memorandum of Agreement between the N. C. Department of Environment and Natural Resources, the N. C. Department of Transportation, and the U. S. Army Corps of Engineers fully executed on March 8, 2007 (Tri-Party MOA). EEP commits to implement sufficient compensatory non-riparian wetland mitigation up to 13.68 non-riparian wetland credits to offset the impacts associated with this project by the end of the MOA year in which this project is permitted. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

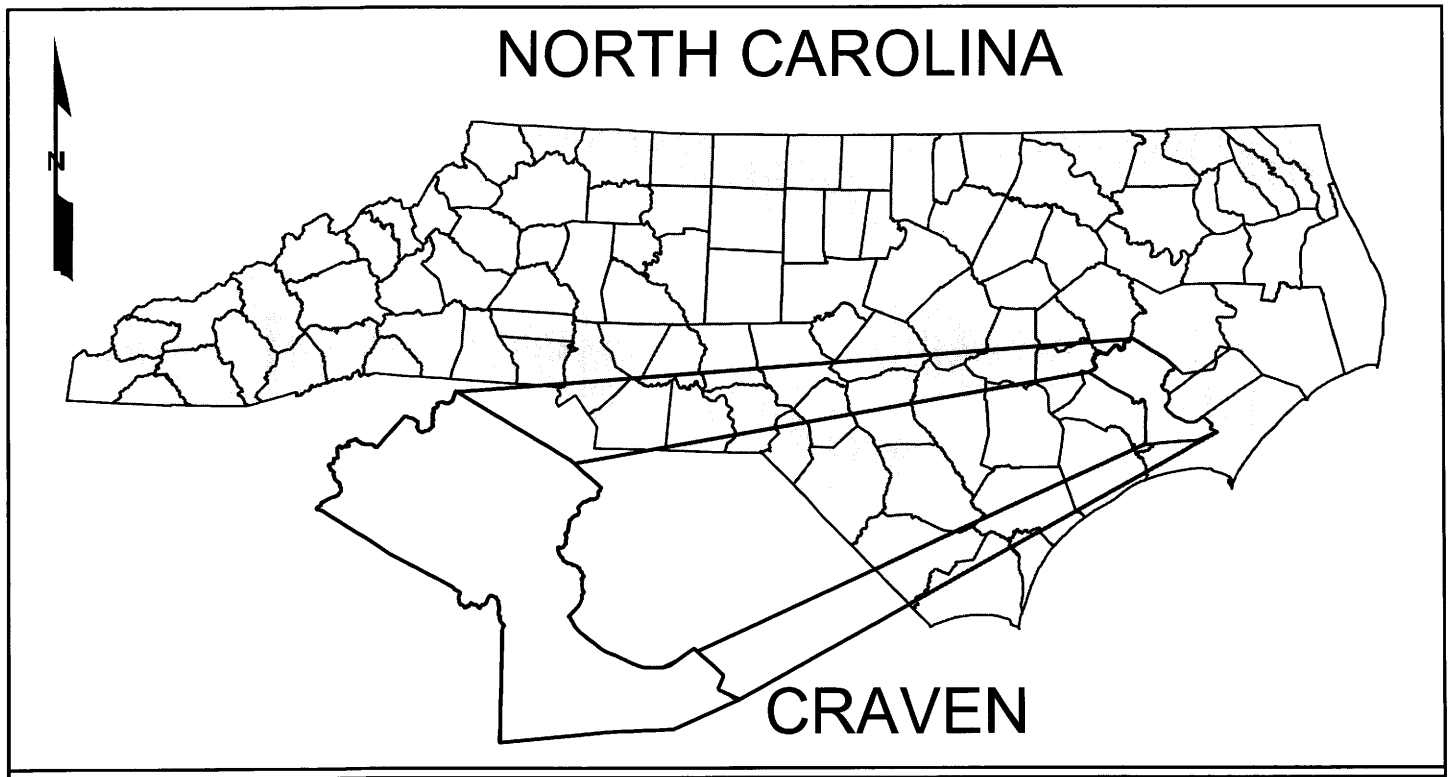
If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

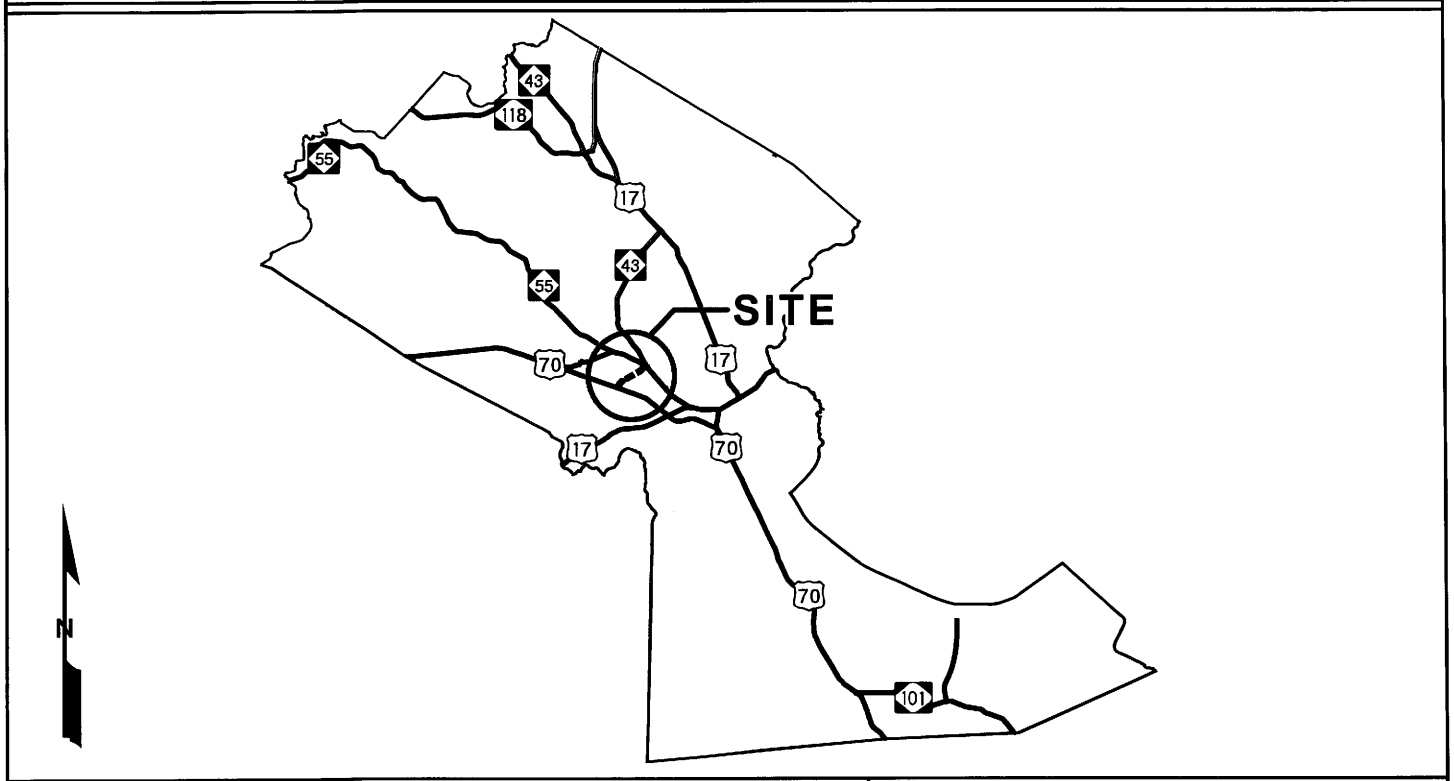
Sincerely,

James B. Stanfill for

William D. Gilmore, P.E.
EEP Director

cc: Mr. Gregory J. Thorpe, Ph.D., NCDOT-PDEA
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit
File: R-4463 Revised



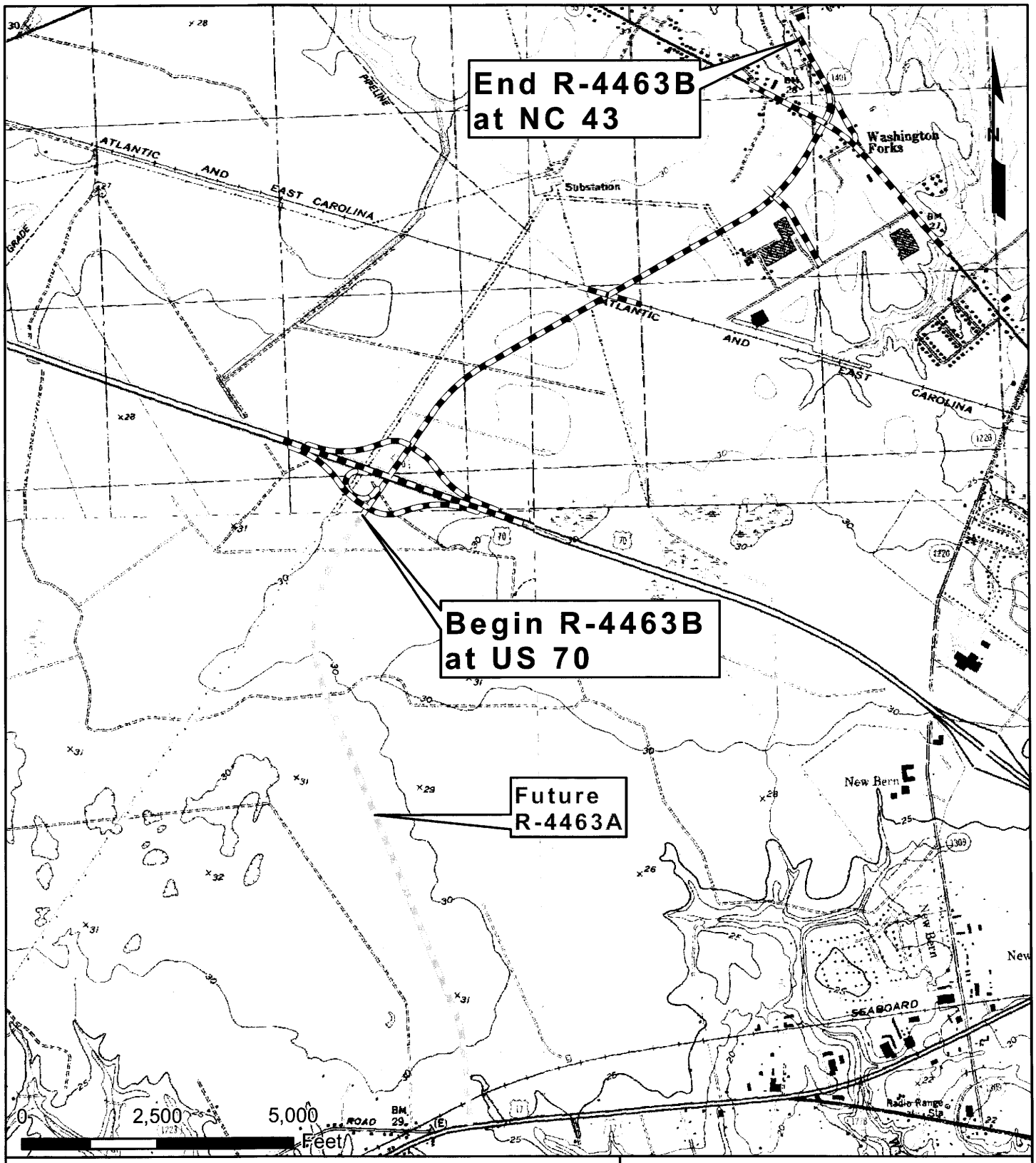


VICINITY MAPS

NCDOT

DIVISION OF HIGHWAYS
CRAVEN COUNTY
PROJECT: 35601.3.2 (R-4463B)
NC 43 CONNECTOR

01/25/08



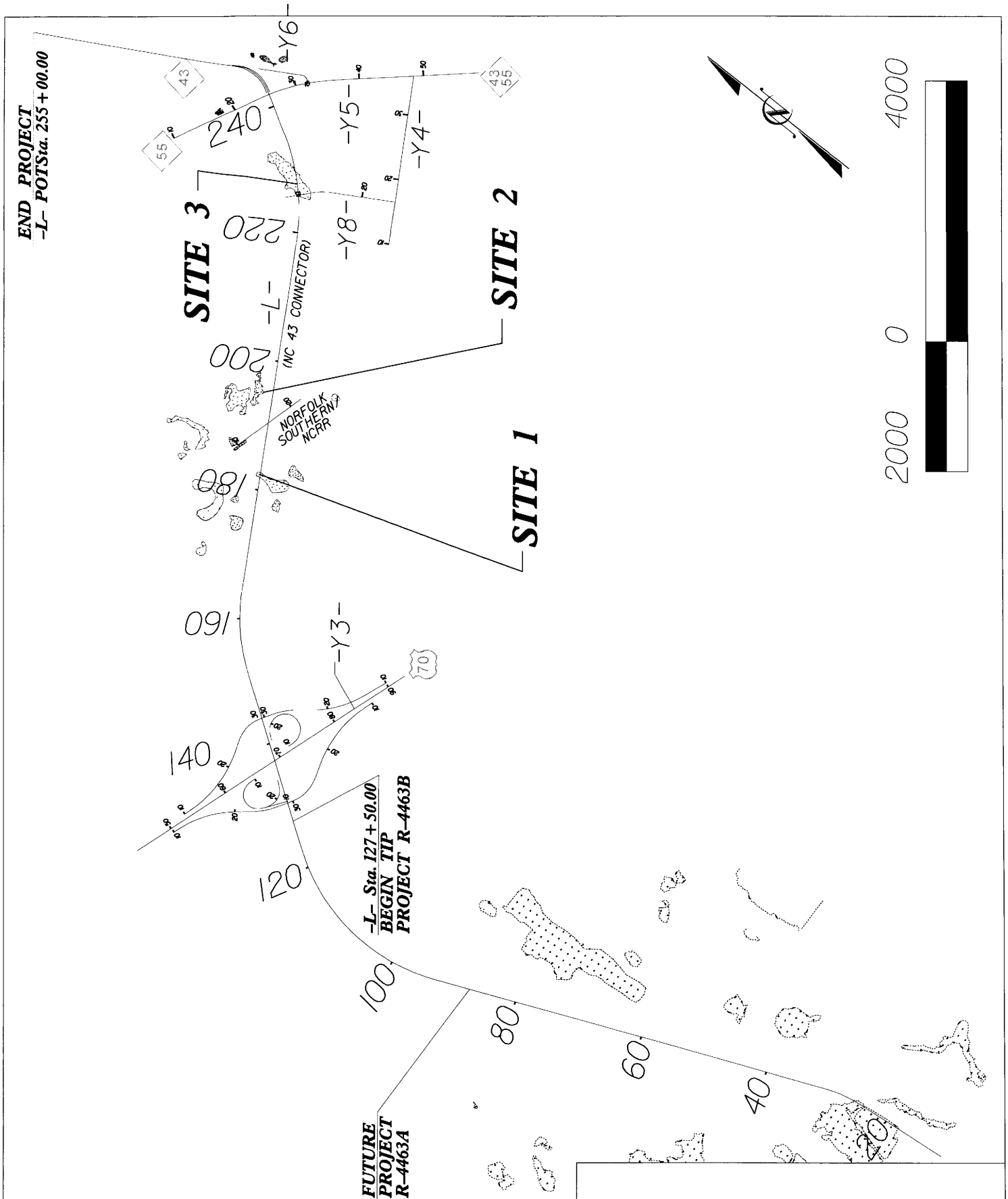
1 inch equals 2,500 feet

LOCATION

NCDOT

DIVISION OF HIGHWAYS
CRAVEN COUNTY
PROJECT: 35601.3.2 (R-4463B)
NC 43 CONNECTOR

01/25/08



SITE MAP

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

PROJECT 35601.3.2 (R-4463B)

NC 43 CONNECTOR

01/25/08

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	-L- 181+04 to 182+76 LT & RT	Roadway	0.31	0.00	0.00	0.02	0.00	0.00	0.00	0	0	0
2	-L- 194+69 to 195+27 LT	Roadway	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0	0	0
3	-L- 224+97 to 231+16 LT & RT	Roadway	1.98	0.00	0.00	0.09	0.00	0.00	0.00	0	0	0
TOTALS:			2.30		0.00	0.12						

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CRAVEN COUNTY
STATE PROJ. NO. 35601.3.2 (R-4463B)

1/25/2008

ATN Revised 3/31/05

R:\Z-MISC\HYDRO\Wetland Permit Summary R-4463B.xls

PROP. NO.	PROPERTY OWNER NAME	PROP. OWNER MAILING ADDRESS
1	WEYERHAEUSER COMPANY	C/O Joel Sickert, Land Adjustment Program Manager Carolina Timberlands 1123 Dinah's Landing Rd. Washington, NC 27889
2	MGR PROPERTIES LLC	Marvin Raines, GRI 312 South Front St. New Bern, NC 28560

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

CRAVEN COUNTY
PROJECT: 35601.3.2 (R-4463B)

1/25/2008

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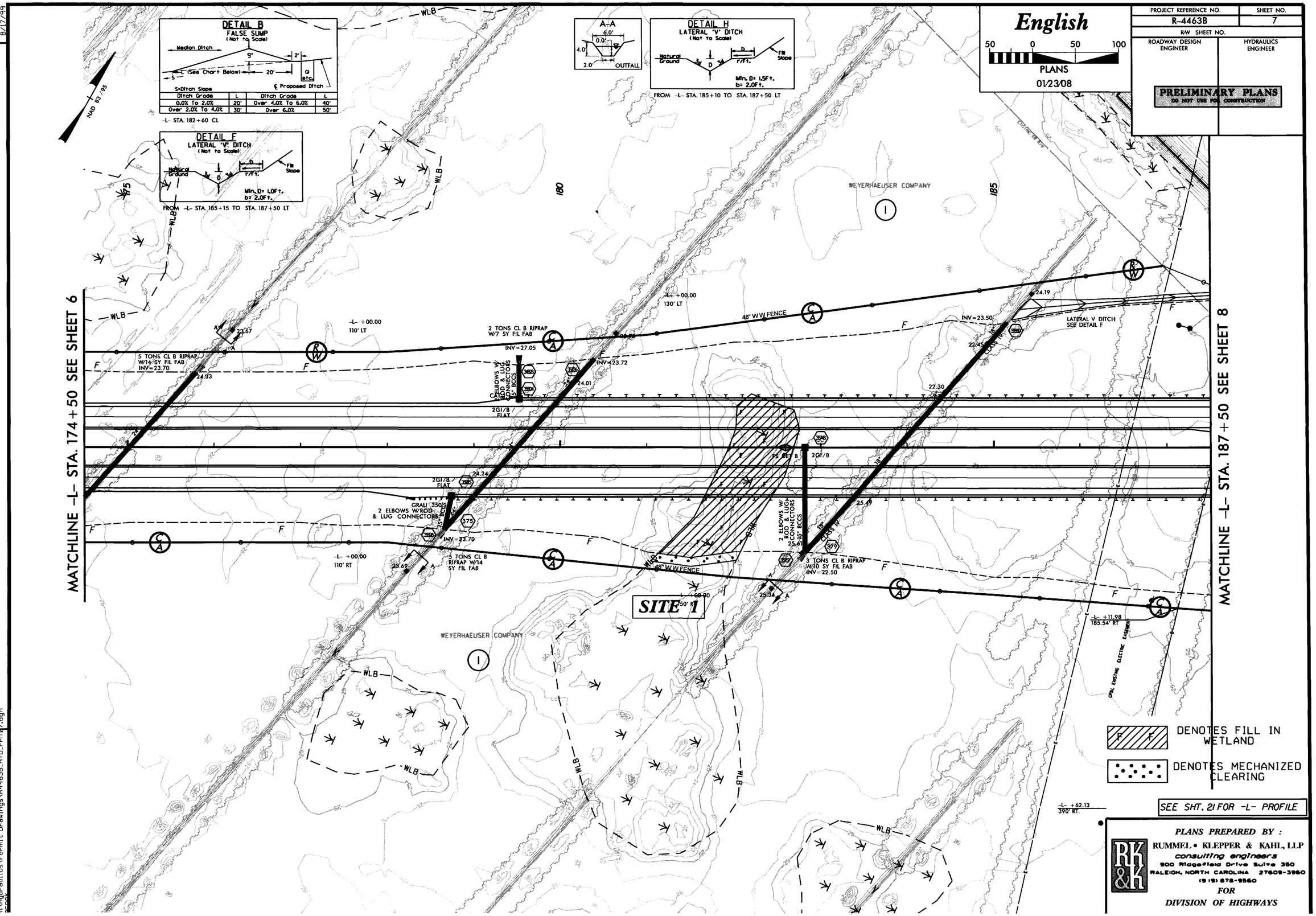

REVISIONS

February 4,2008: Construction Revision #2: Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the Railroad.

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

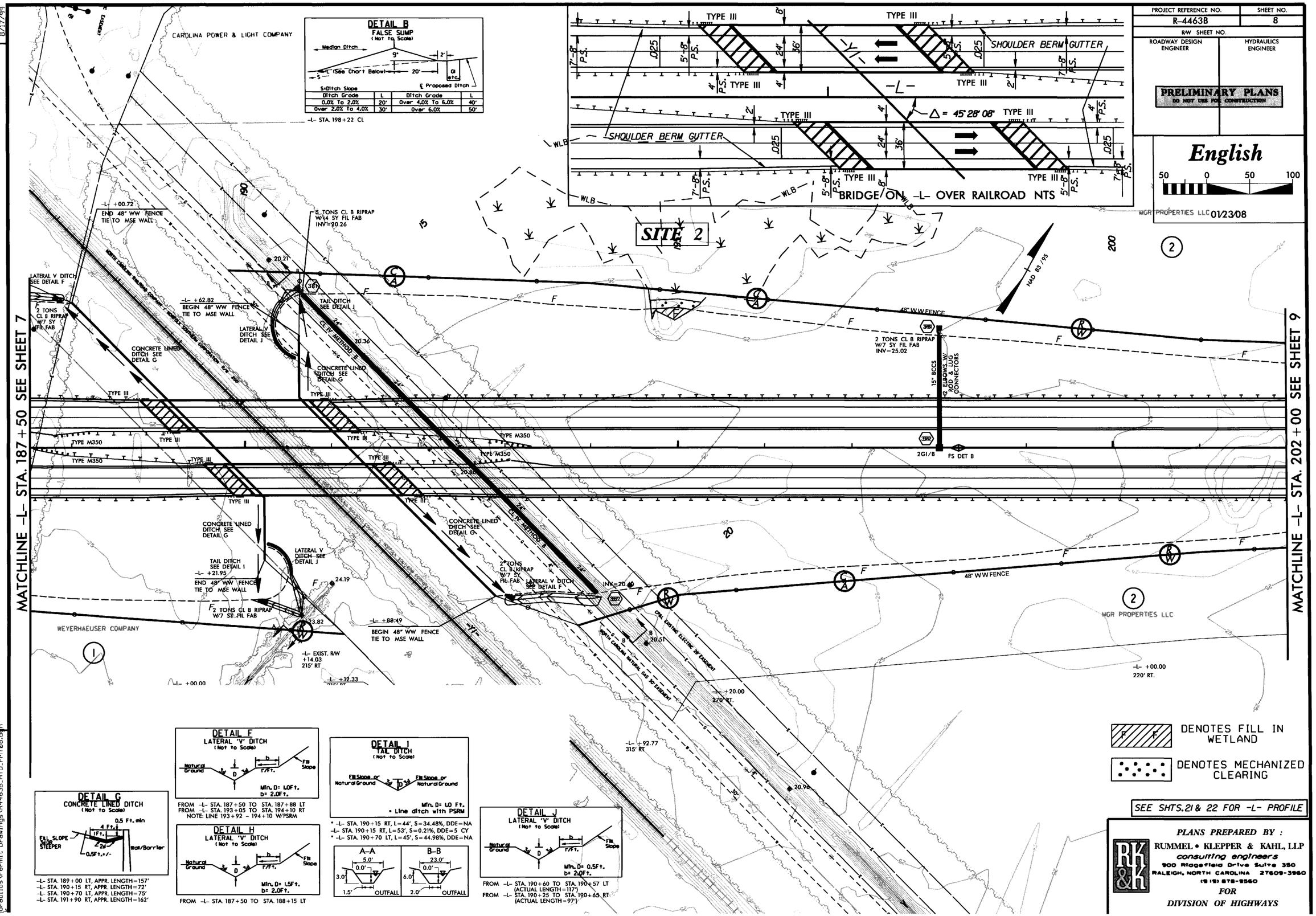
English
50 0 50 100

MGR PROPERTIES LLC 01/23/08

REVISIONS

February 4,2008: Construction Revision #2 - Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the railroad.

8/17/99



PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

4\08 15:19:02
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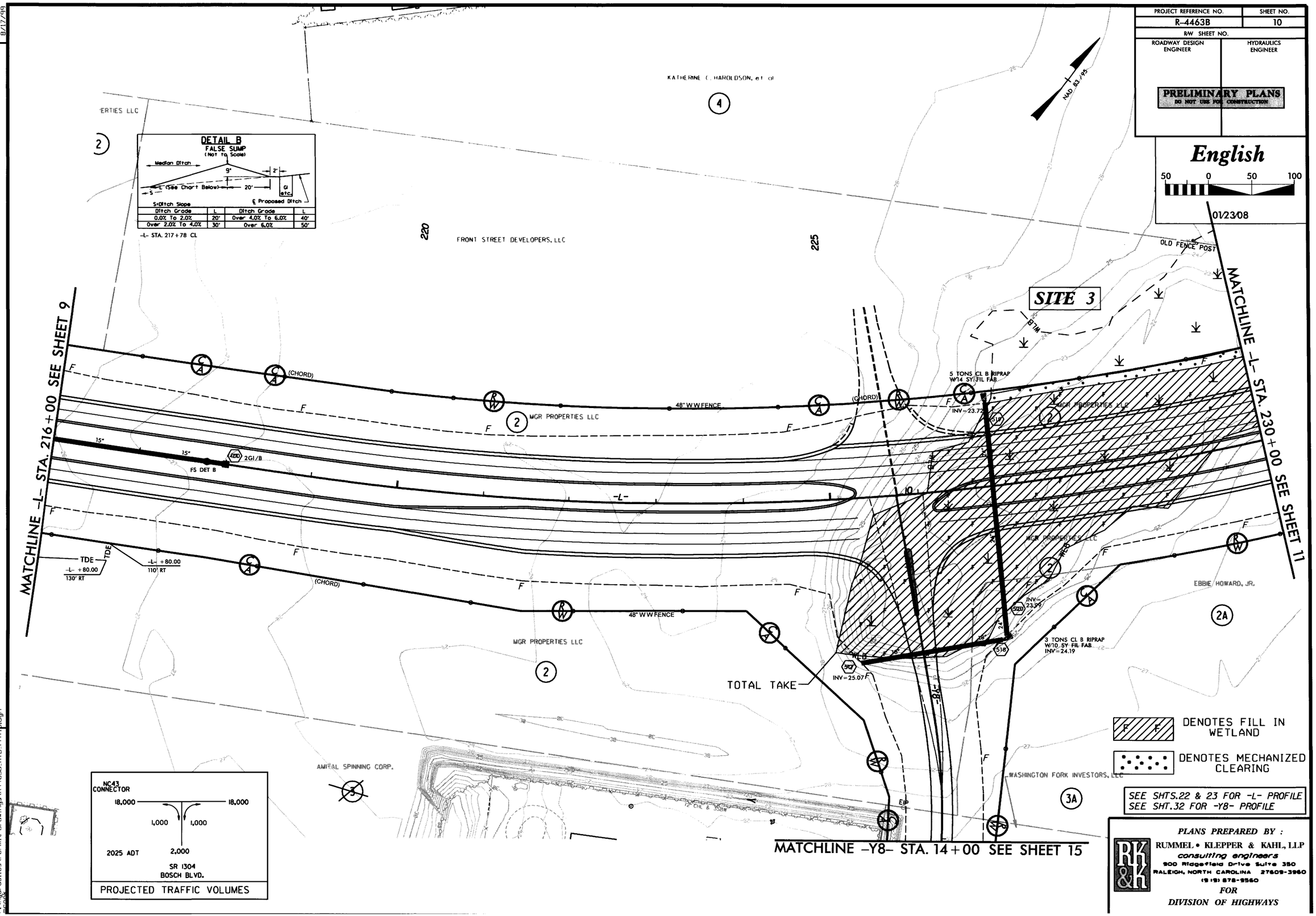
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

English
50 0 50 100
01/23/08



PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

REVISIONS
February 4,2008: Construction revision #2 - Added right turn lane opposite -Y8-.

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

English
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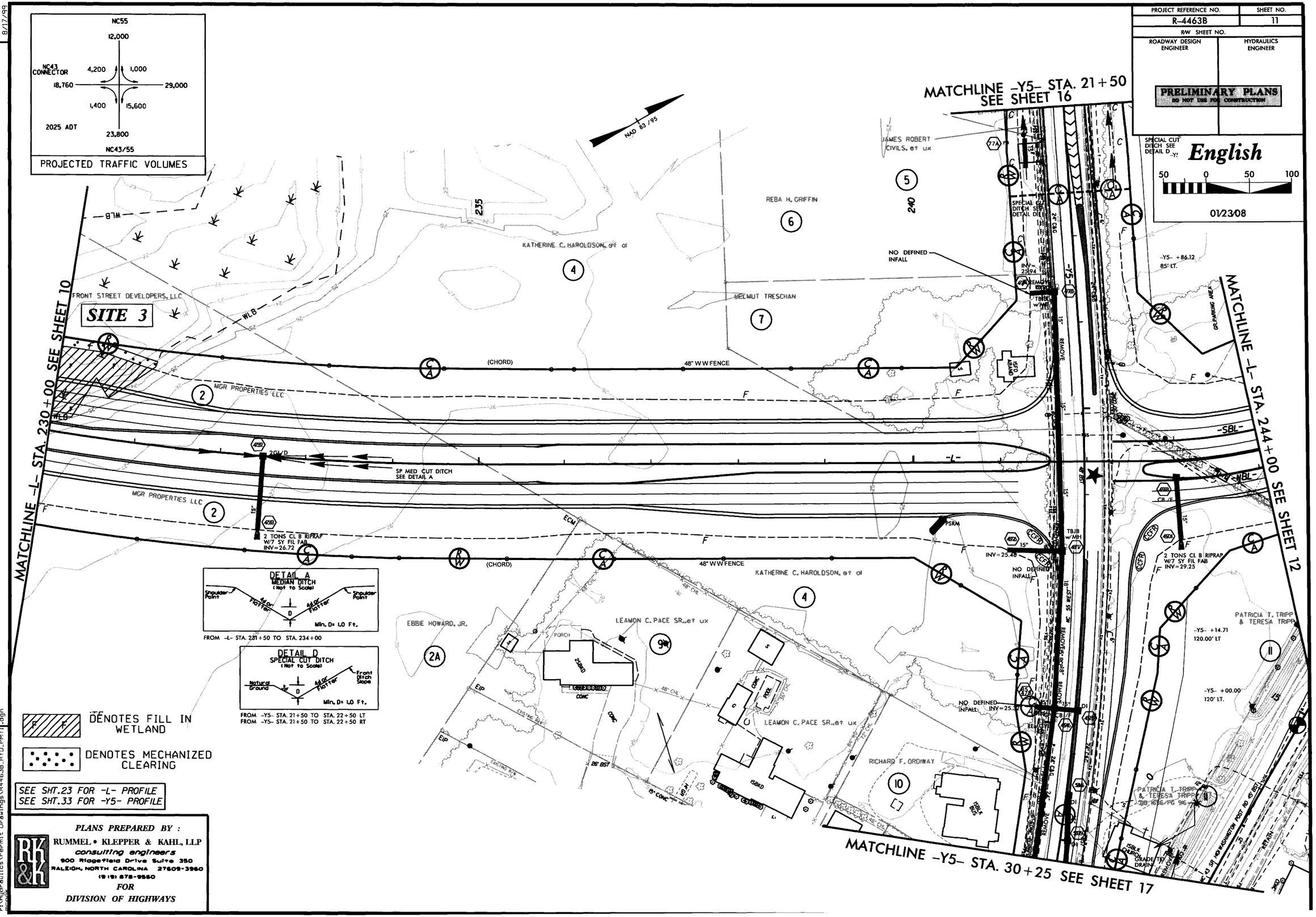
01/23/08



PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

REVISIONS
February 4,2008: Construction revision #2 - Added right turn lane opposite -Y8-.

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

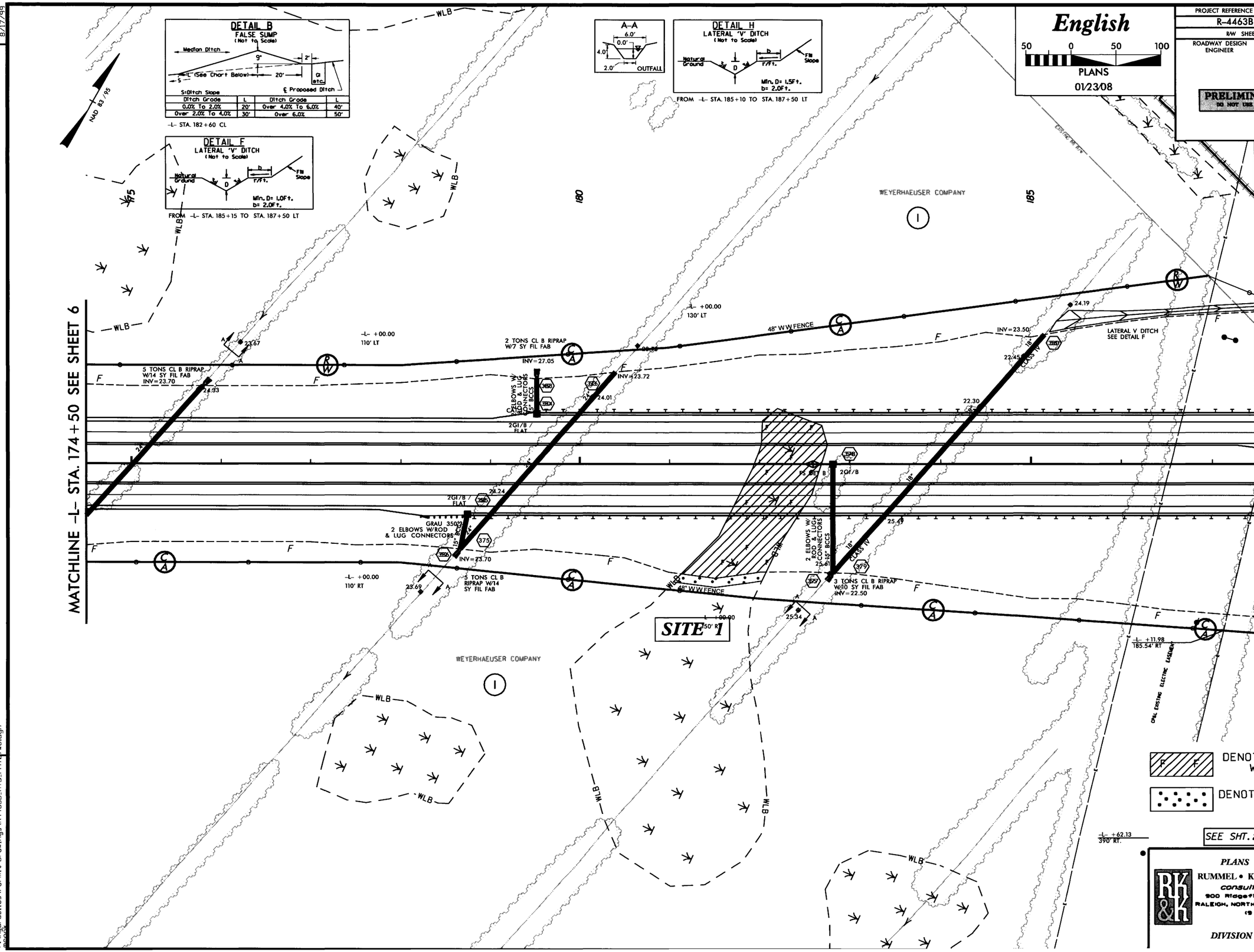
English

50 0 50 100

PLANS

01/23/08

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

REVISIONS

February 4,2008: Construction Revision #2: Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the Railroad.

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

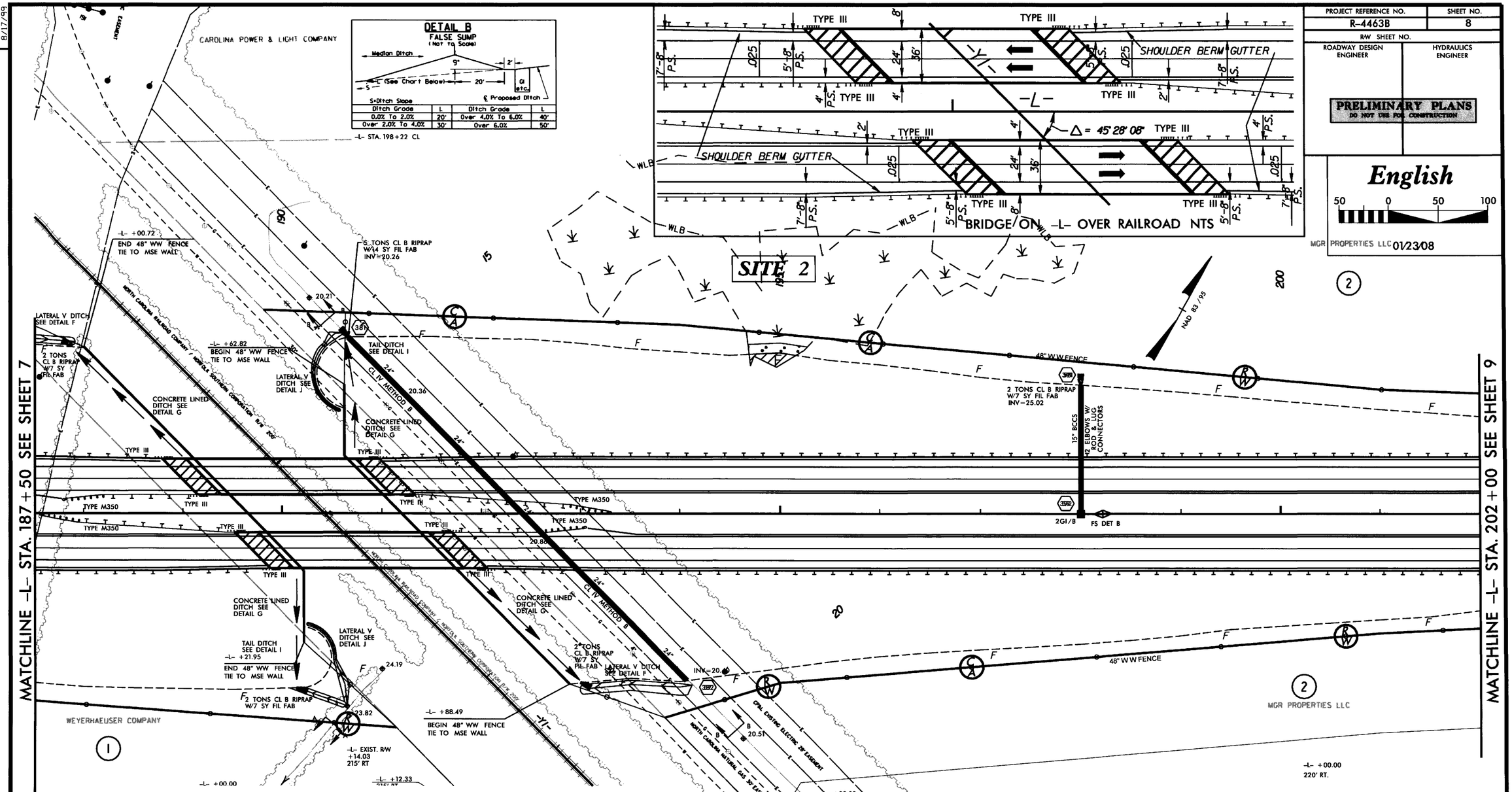
English
50 0 50 100

MGR PROPERTIES LLC 01/23/08

REVISIONS

February 4, 2008: Construction Revision #2 - Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the railroad.

8/17/99



SEE SHTS.21 & 22 FOR -L- PROFILE

PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

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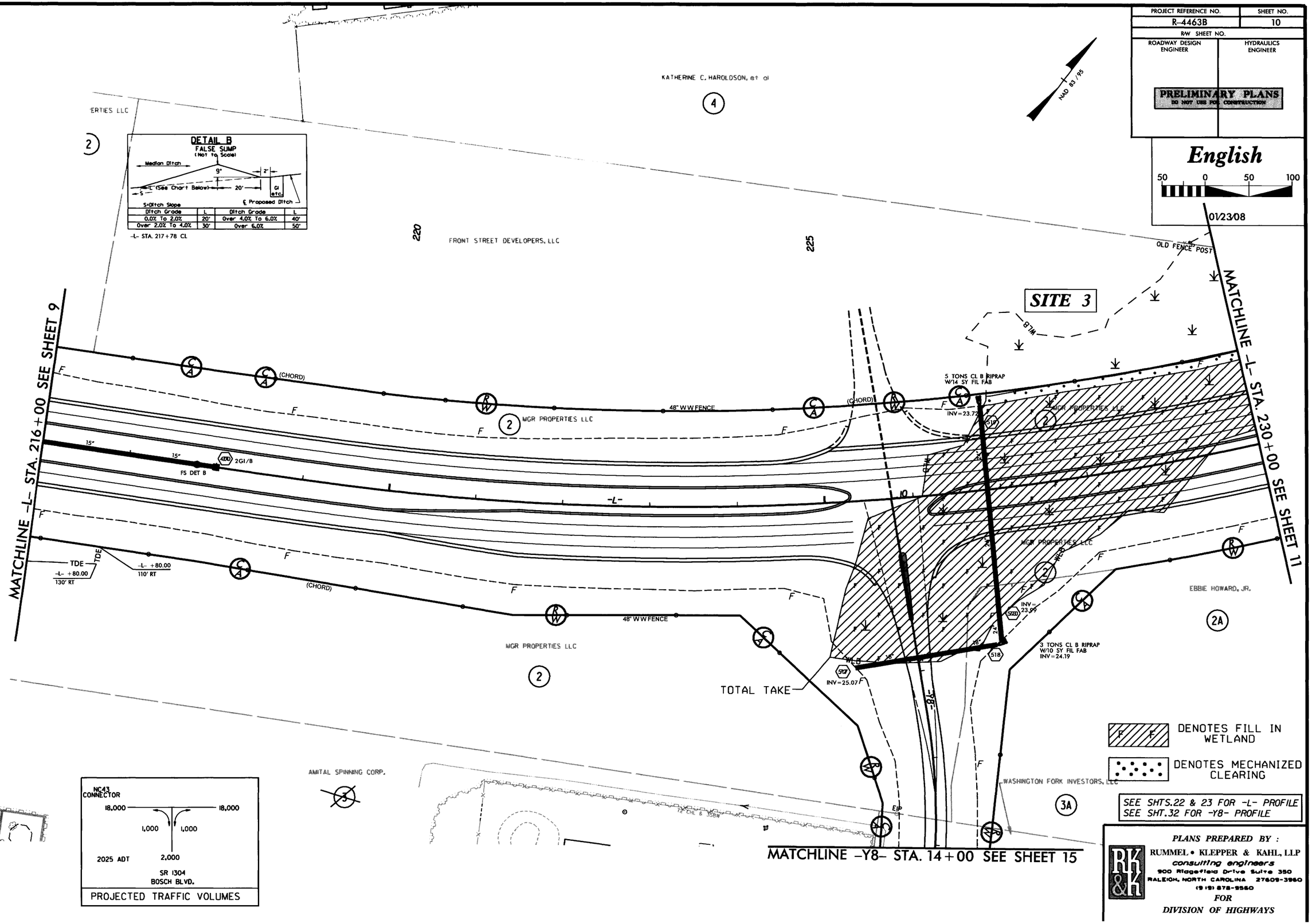
PROJECT REFERENCE NO.
R-4463B
SHEET NO.
10
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
English
50 0 50 100
01/23/08
NAD 83/95
KATHERINE C. HAROLDSON, et al
FRONT STREET DEVELOPERS, LLC
OLD FENCE POST
SITE 3
MATCHLINE -L- STA. 216+00 SEE SHEET 9
MATCHLINE -L- STA. 230+00 SEE SHEET 11
MATCHLINE -Y8- STA. 14+00 SEE SHEET 15
MGR PROPERTIES LLC
48" W W FENCE
(CHORD)
5 TONS CL B RIPRAP W/14 SY FIL FAB
INV=23.72
3 TONS CL B RIPRAP W/10 SY FIL FAB
INV=24.19
INV=25.07
INV=23.99
FS DET B
2GI/B
TDE
-L- +80.00
130' RT
110' RT
TOTAL TAKE
EBBIE HOWARD, JR.
AMITAL SPINNING CORP.
WASHINGTON FORK INVESTORS, LLC
DETAIL B
FALSE SUMP
(Not to Scale)
Median Ditch
9'
2'
20'
L (See Chart Below)
S
GI etc.
℄ Proposed Ditch
S=Ditch Slope
Ditch Grade | L | Ditch Grade | L
0.0% To 2.0% | 20' | Over 4.0% To 6.0% | 40'
Over 2.0% To 4.0% | 30' | Over 6.0% | 50'
-L- STA. 217+78 CL
NC43 CONNECTOR
18,000
18,000
1,000
1,000
2,000
2025 ADT
SR 1304
BOSCH BLVD.
PROJECTED TRAFFIC VOLUMES
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
SEE SHTS.22 & 23 FOR -L- PROFILE
SEE SHT.32 FOR -Y8- PROFILE
PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS
REVISIONS
February 4,2008: Construction revision #2 - Added right turn lane opposite -Y8-.
8/17/99
12\04\08 15:40:48
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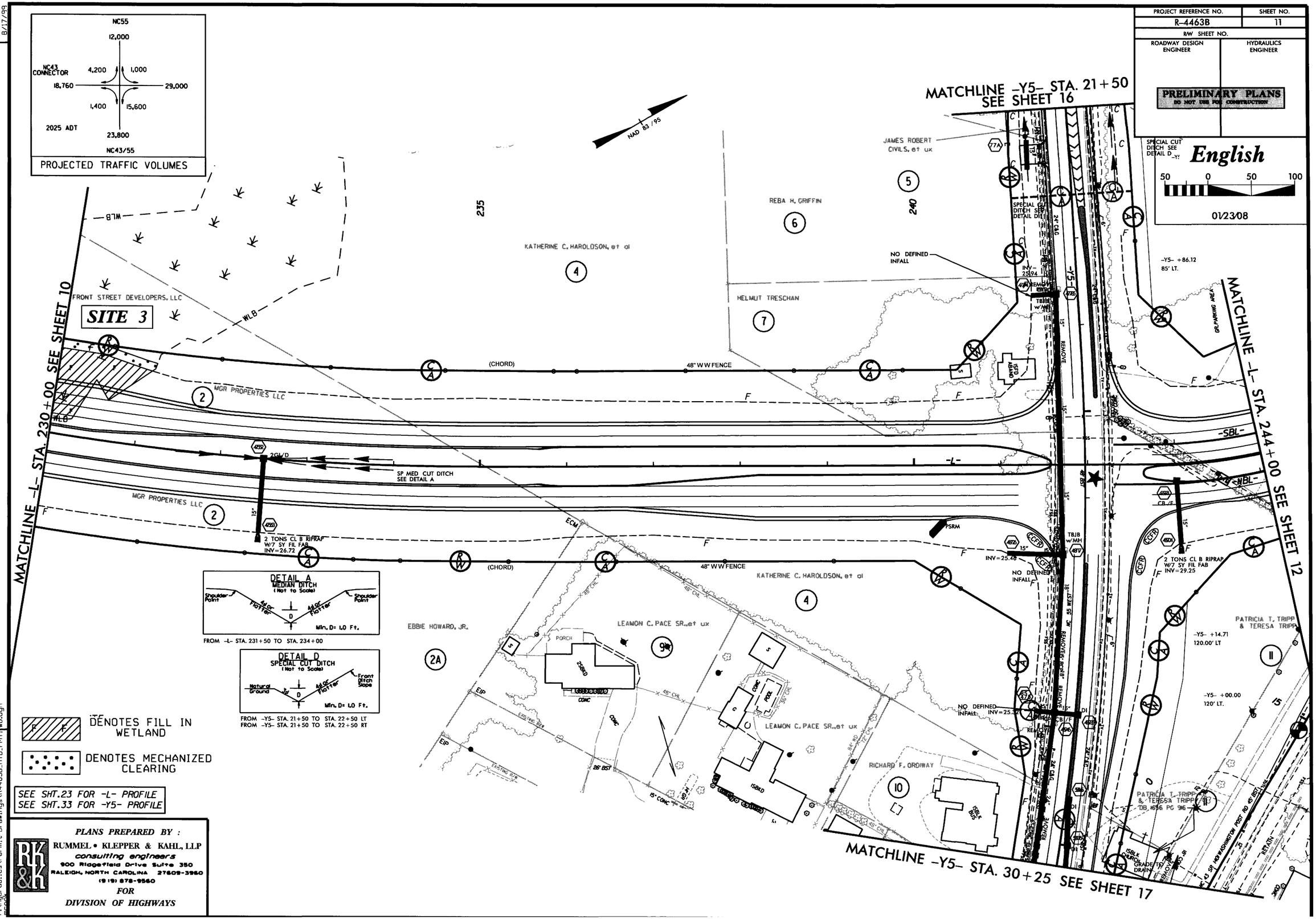


PROJECT REFERENCE NO.
R-4463B
SHEET NO.
11
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
English
50 0 50 100
01/23/08
NC55
12,000
NC43 CONNECTOR
4,200
1,000
18,760
29,000
1,400
15,600
2025 ADT
23,800
NC43/55
PROJECTED TRAFFIC VOLUMES
NAD 83/95
MATCHLINE -Y5- STA. 21+50 SEE SHEET 16
MATCHLINE -L- STA. 230+00 SEE SHEET 10
MATCHLINE -L- STA. 244+00 SEE SHEET 12
MATCHLINE -Y5- STA. 30+25 SEE SHEET 17
SITE 3
FRONT STREET DEVELOPERS, LLC
MGR PROPERTIES LLC
KATHERINE C. HAROLDSON, et al
REBA H. GRIFFIN
HELMUT TRESCHAN
JAMES ROBERT CIVILS, et ux
EBBIE HOWARD, JR.
LEAMON C. PACE SR., et ux
RICHARD F. ORDIWAY
PATRICIA T. TRIPP & TERESA TRIPP
(CHORD)
48" W W FENCE
SP MED CUT DITCH SEE DETAIL A
2 TONS CL B RIPRAP W/7 SY FIL FAB INV=26.72
2 TONS CL B RIPRAP W/7 SY FIL FAB INV=29.25
NO DEFINED INFALL
SPECIAL CUT DITCH SEE DETAIL D
-Y5- +86.12 85' LT.
-Y5- +14.71 120.00' LT
-Y5- +00.00 120' LT.
DETAIL A
MEDIAN DITCH
(Not to Scale)
Shoulder Point
4:1 or Flatter
Min. D= 1.0 Ft.
FROM -L- STA. 231+50 TO STA. 234+00
DETAIL D
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground
Front Ditch Slope
Min. D= 1.0 Ft.
FROM -Y5- STA. 21+50 TO STA. 22+50 LT
FROM -Y5- STA. 21+50 TO STA. 22+50 RT
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
SEE SHT.23 FOR -L- PROFILE
SEE SHT.33 FOR -Y5- PROFILE
PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS
REVISIONS
February 4,2008: Construction revision #2 - Added right turn lane opposite -Y8-.
8/17/99
02\04\08 15:44:58
r:\Hydraulics\Permit Drawings\R4463B_HYD_PMT1wo.dgn

5/28/99

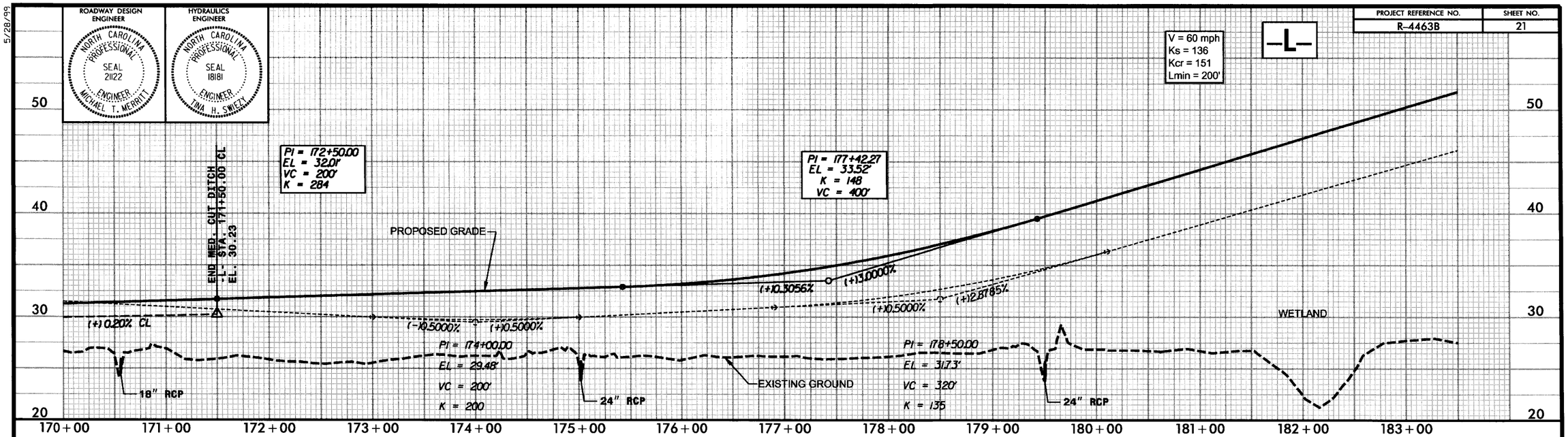
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	21

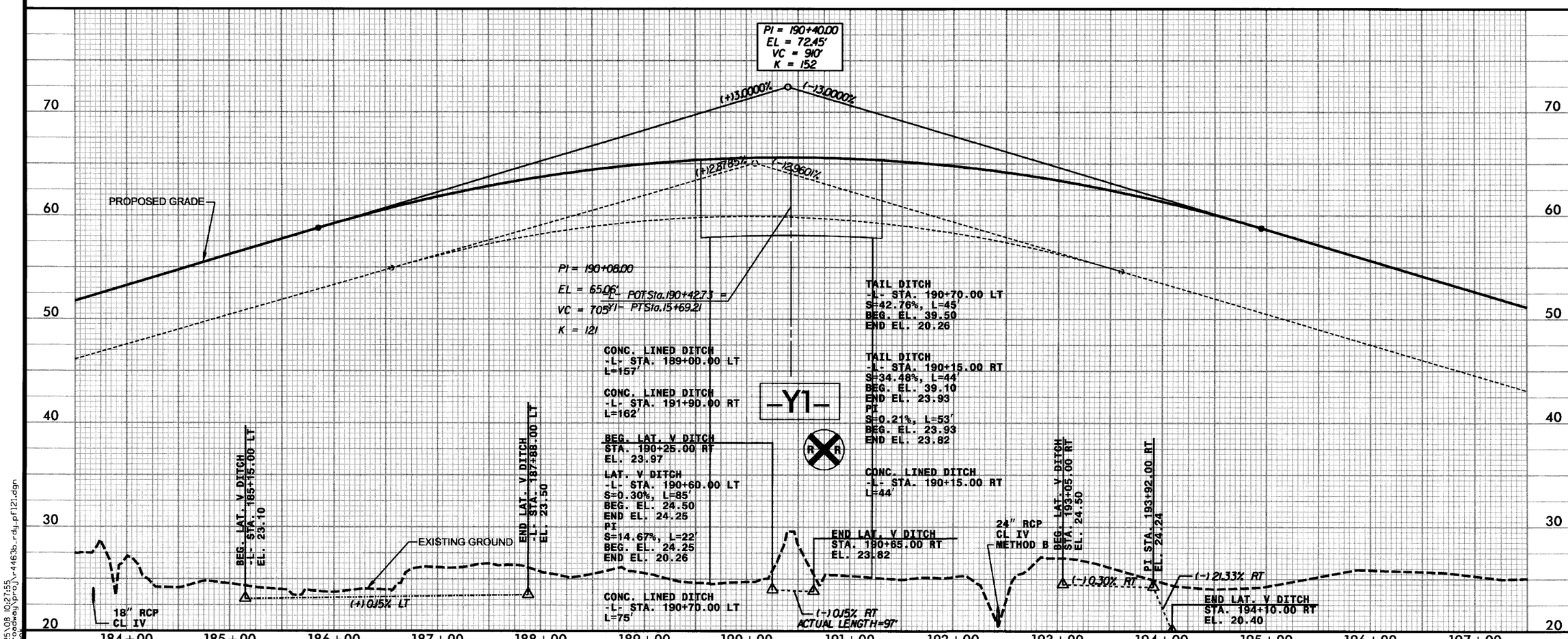
ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWEZY

V = 60 mph
Ks = 136
Kcr = 151
Lmin = 200'

-L-





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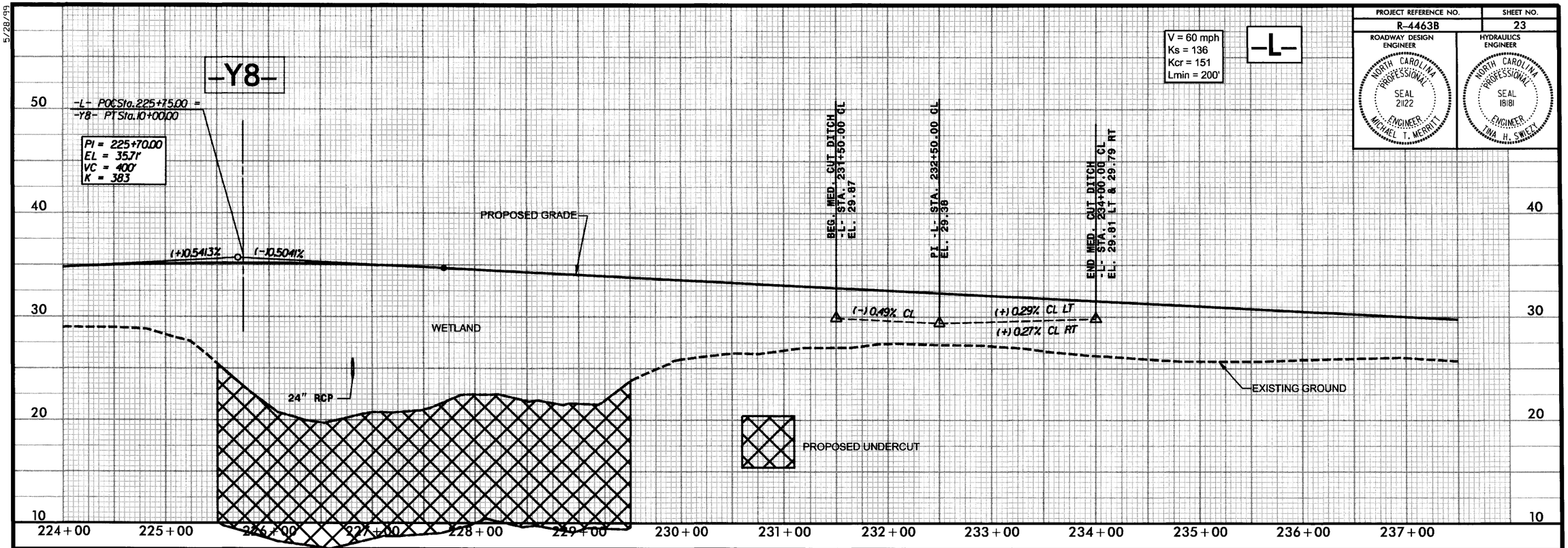
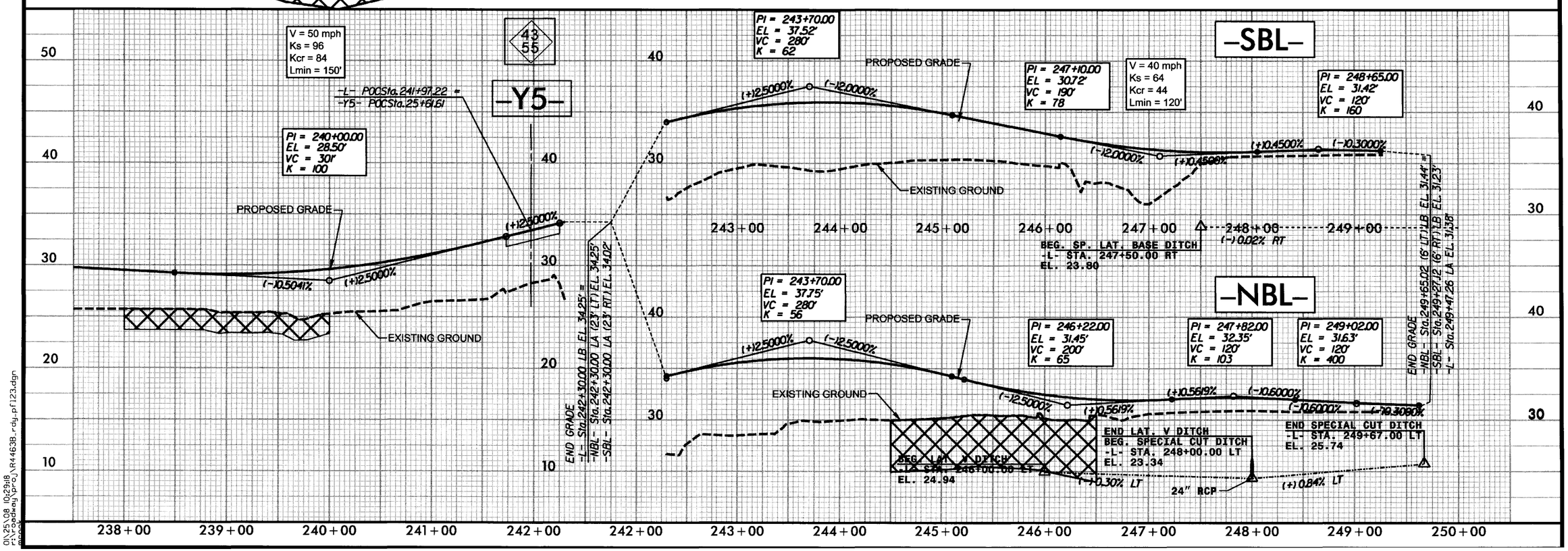
5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	23

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWIEZY





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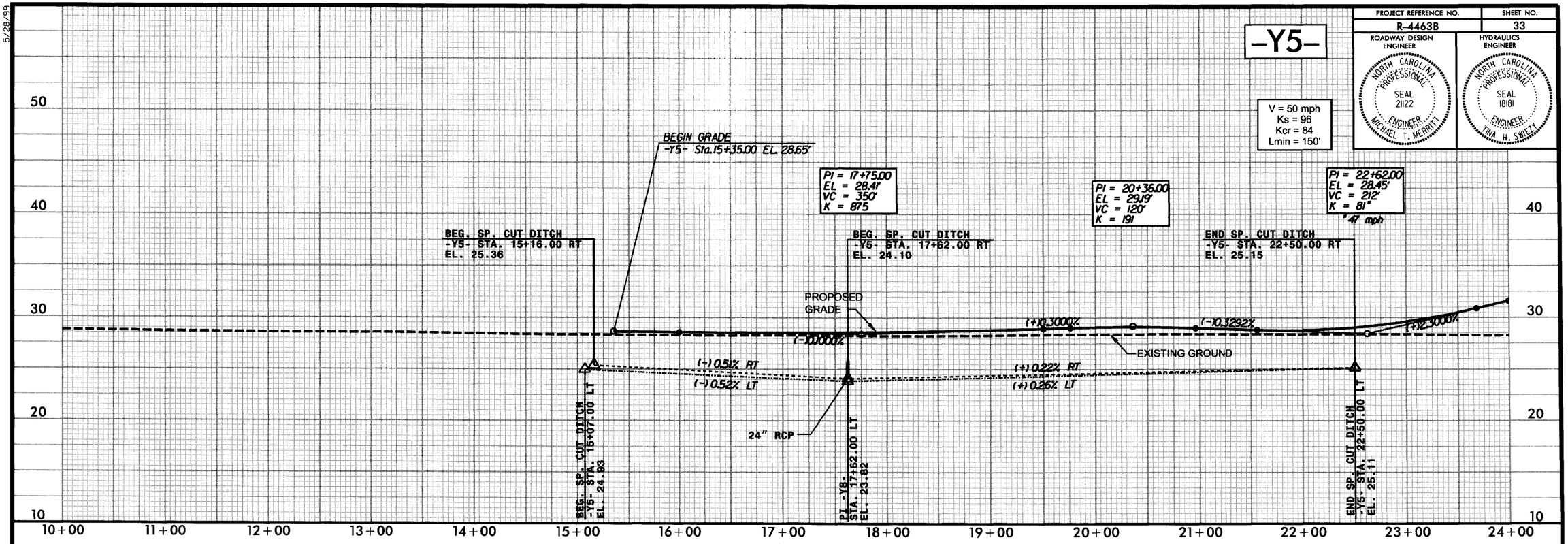
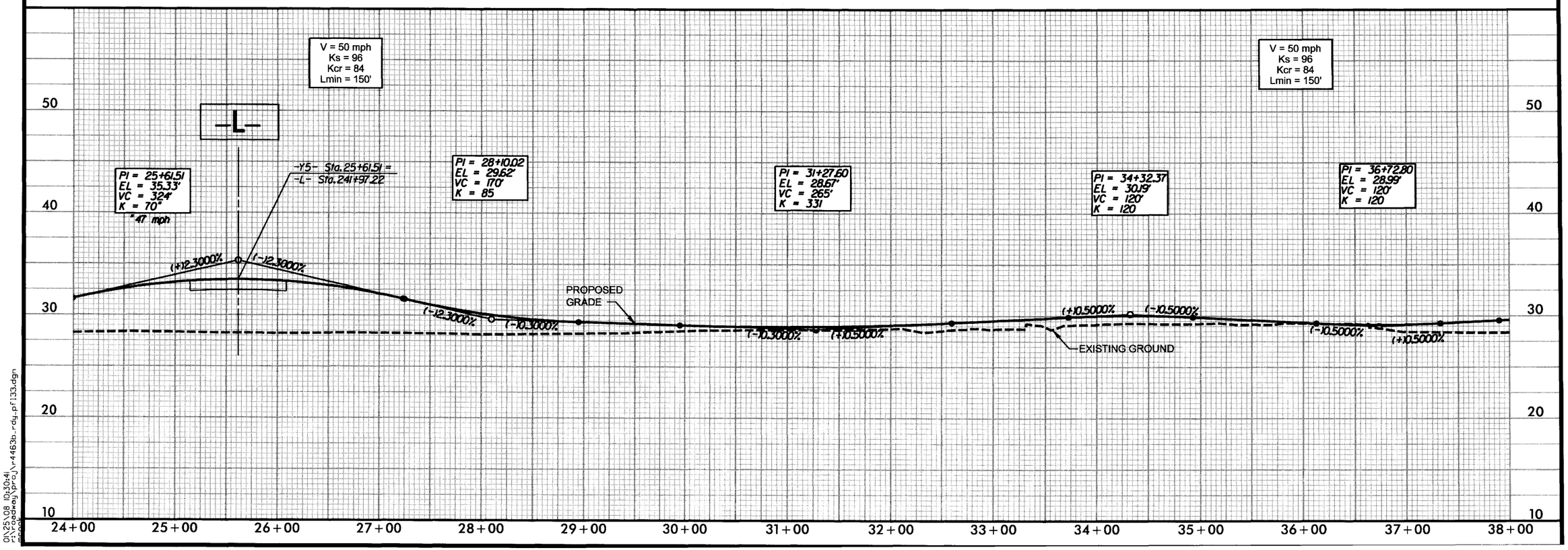
5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	33
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER LINA H. SWEZY





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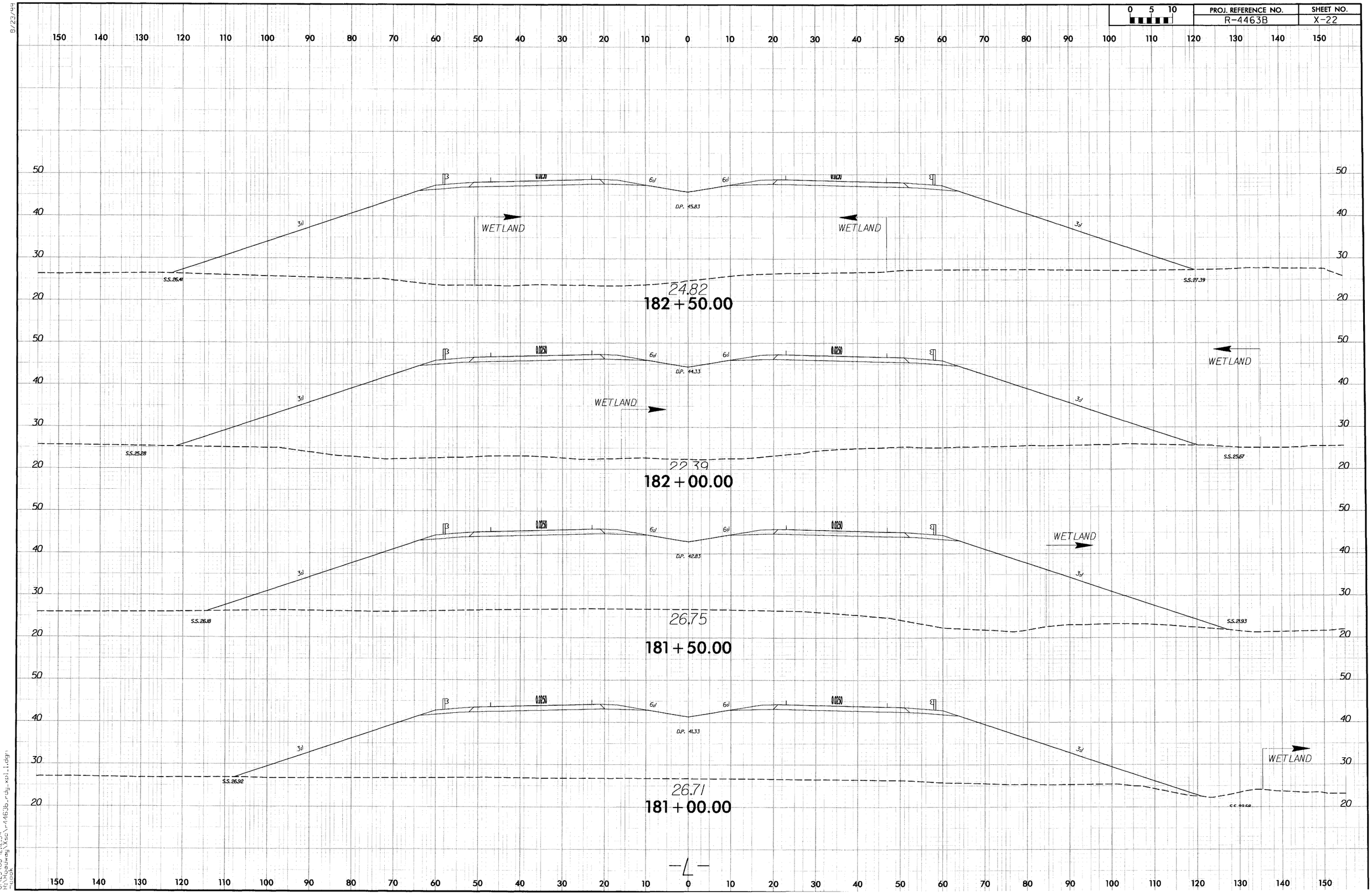
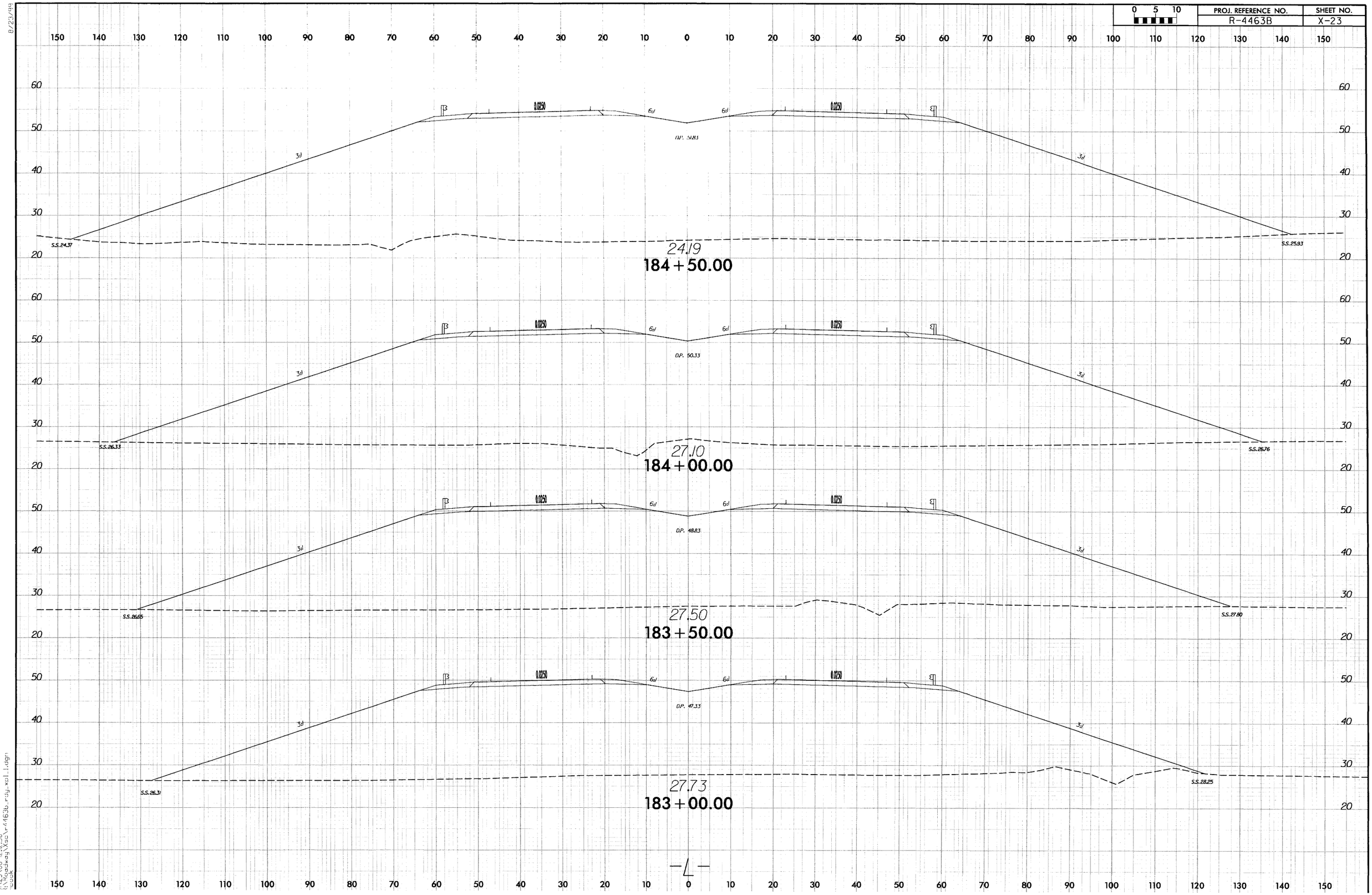
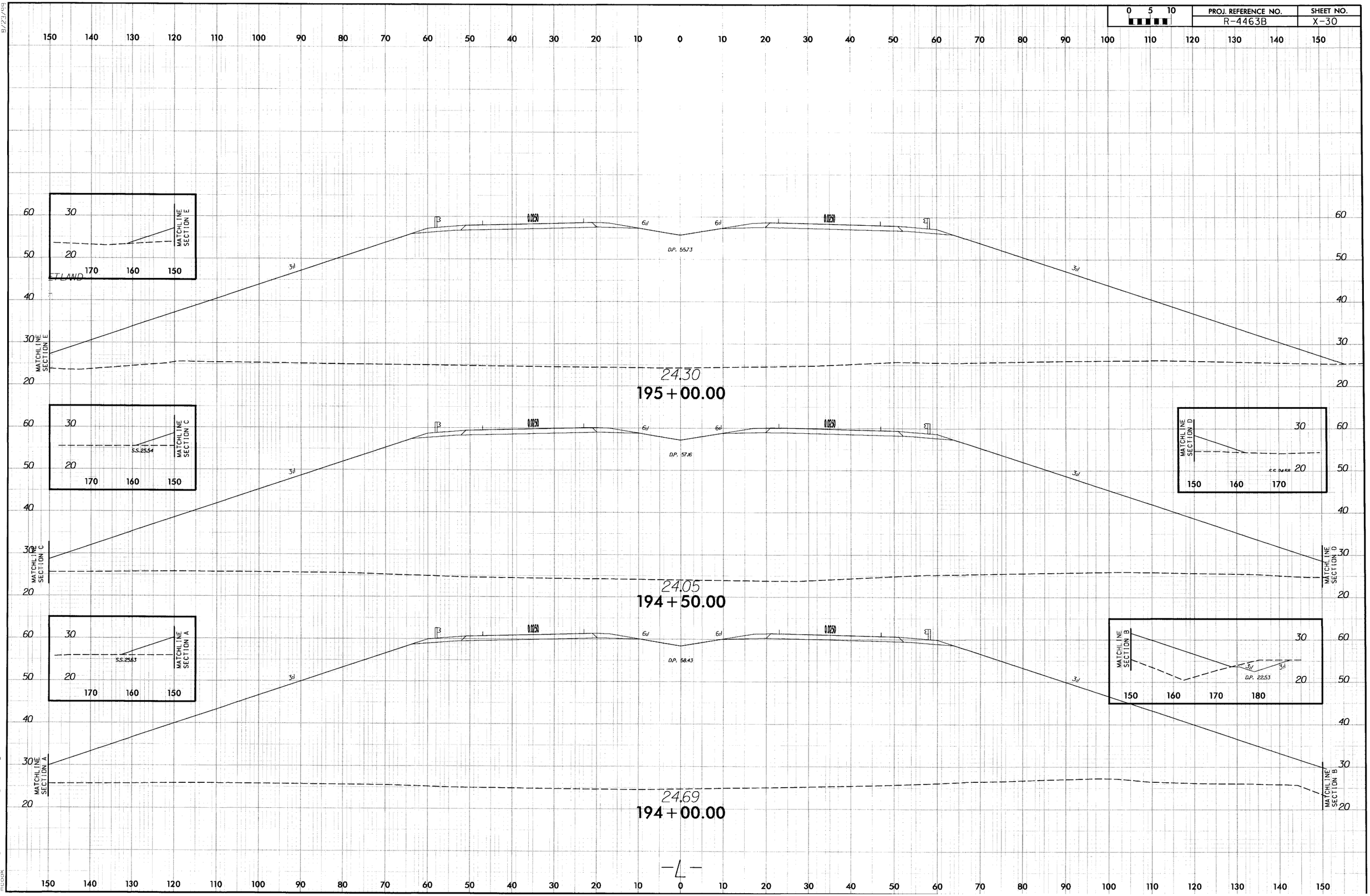
PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-22

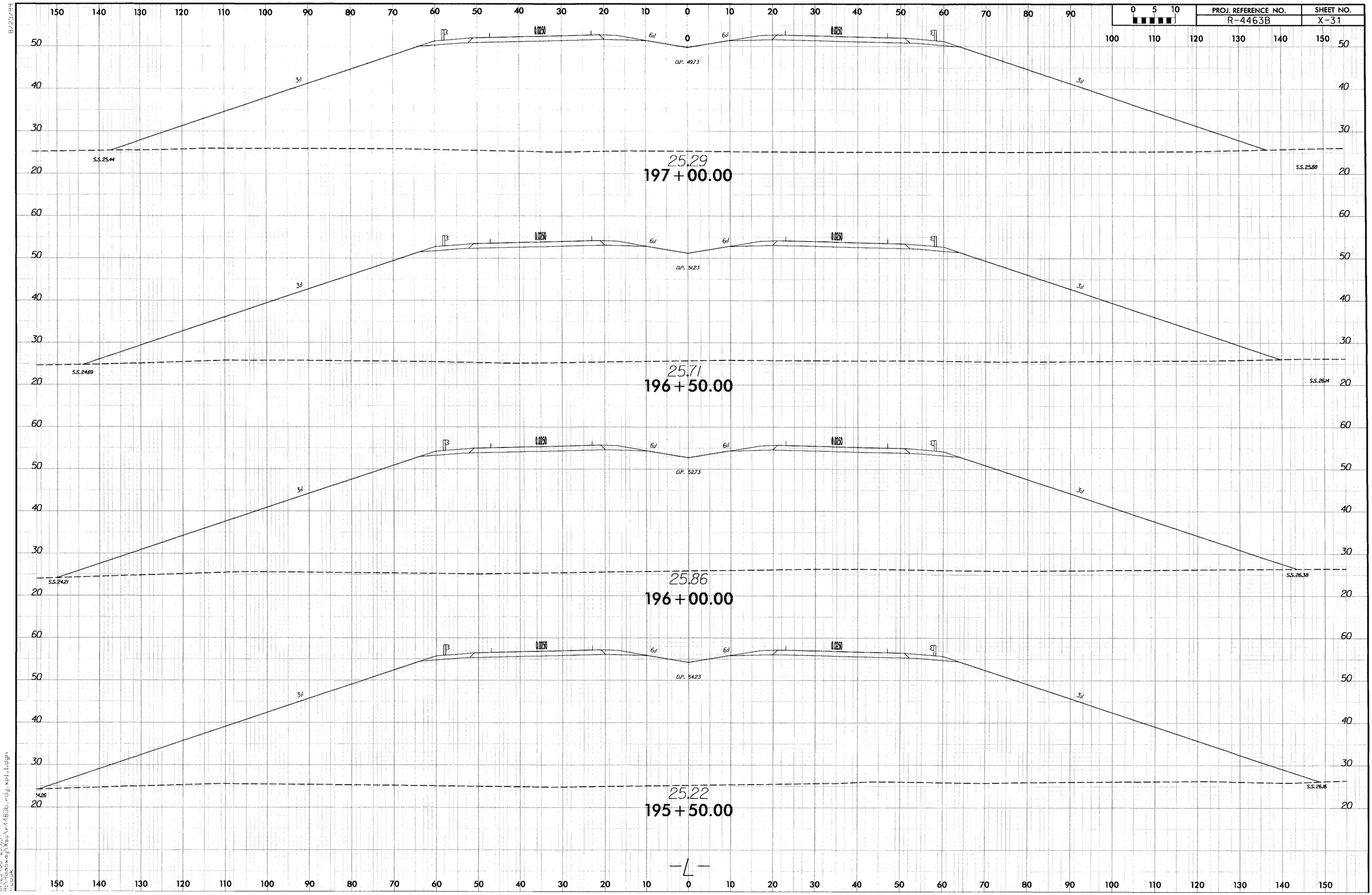


PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-23





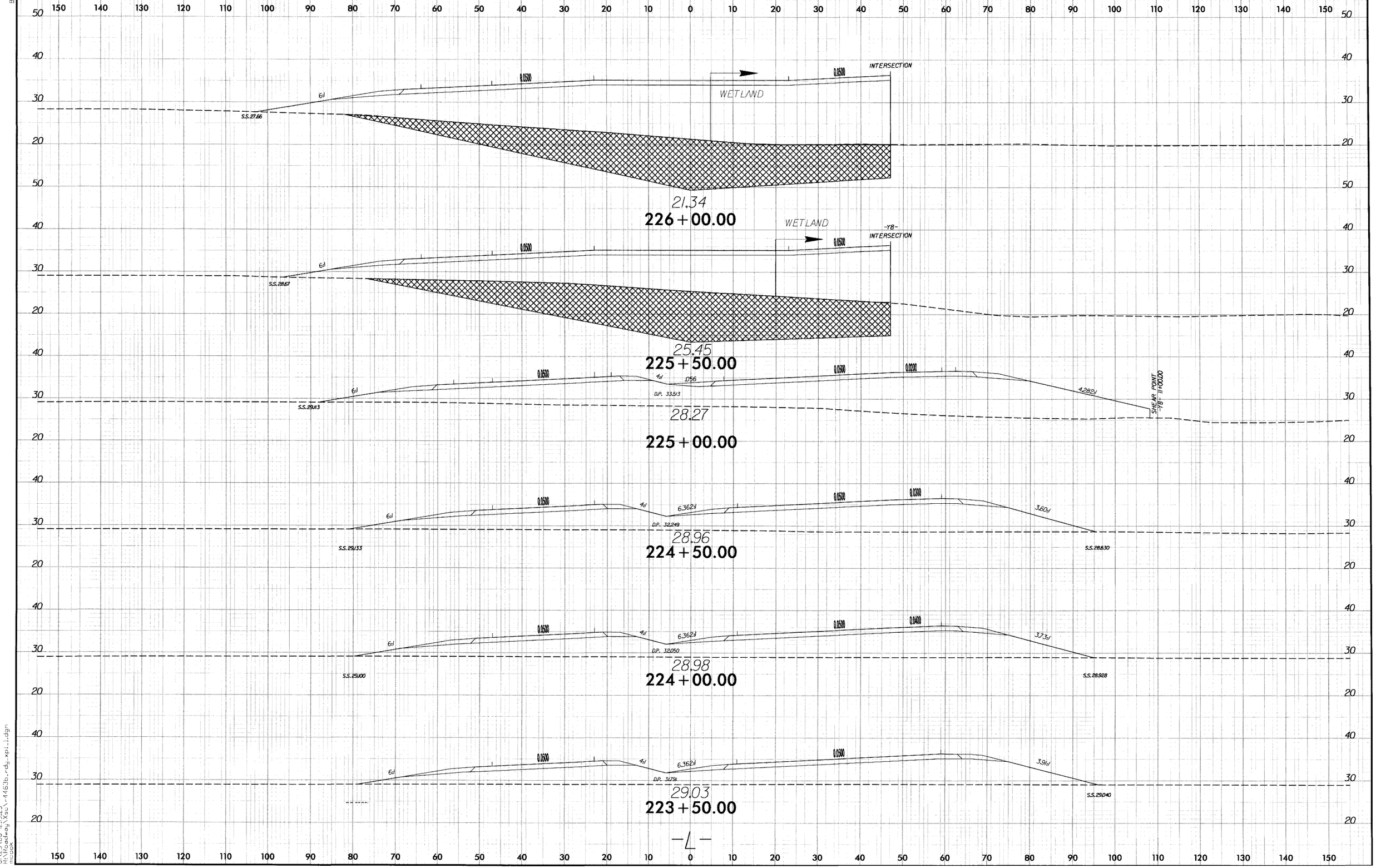
PROJ. REFERENCE NO.
R-4463B
SHEET NO.
X-30
0 5 10
24.30
195+00.00
24.05
194+50.00
24.69
194+00.00
D.P. 55.73
D.P. 57.16
D.P. 58.43
D.P. 22.53
S.S. 25.54
S.S. 25.63
MATCHLINE SECTION A
MATCHLINE SECTION B
MATCHLINE SECTION C
MATCHLINE SECTION D
MATCHLINE SECTION E
-L-



PROJ. REFERENCE NO.
R-4463B
SHEET NO.
X-31
0 5 10
D.P. 49.73
S.S. 25.44
S.S. 25.88
25.29
197+00.00
D.P. 51.23
S.S. 24.69
S.S. 26.14
25.71
196+50.00
D.P. 52.73
S.S. 24.21
S.S. 26.38
25.86
196+00.00
D.P. 54.23
S.S. 26.16
25.22
195+50.00
-L-

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-41

0 5 10



B/23/99

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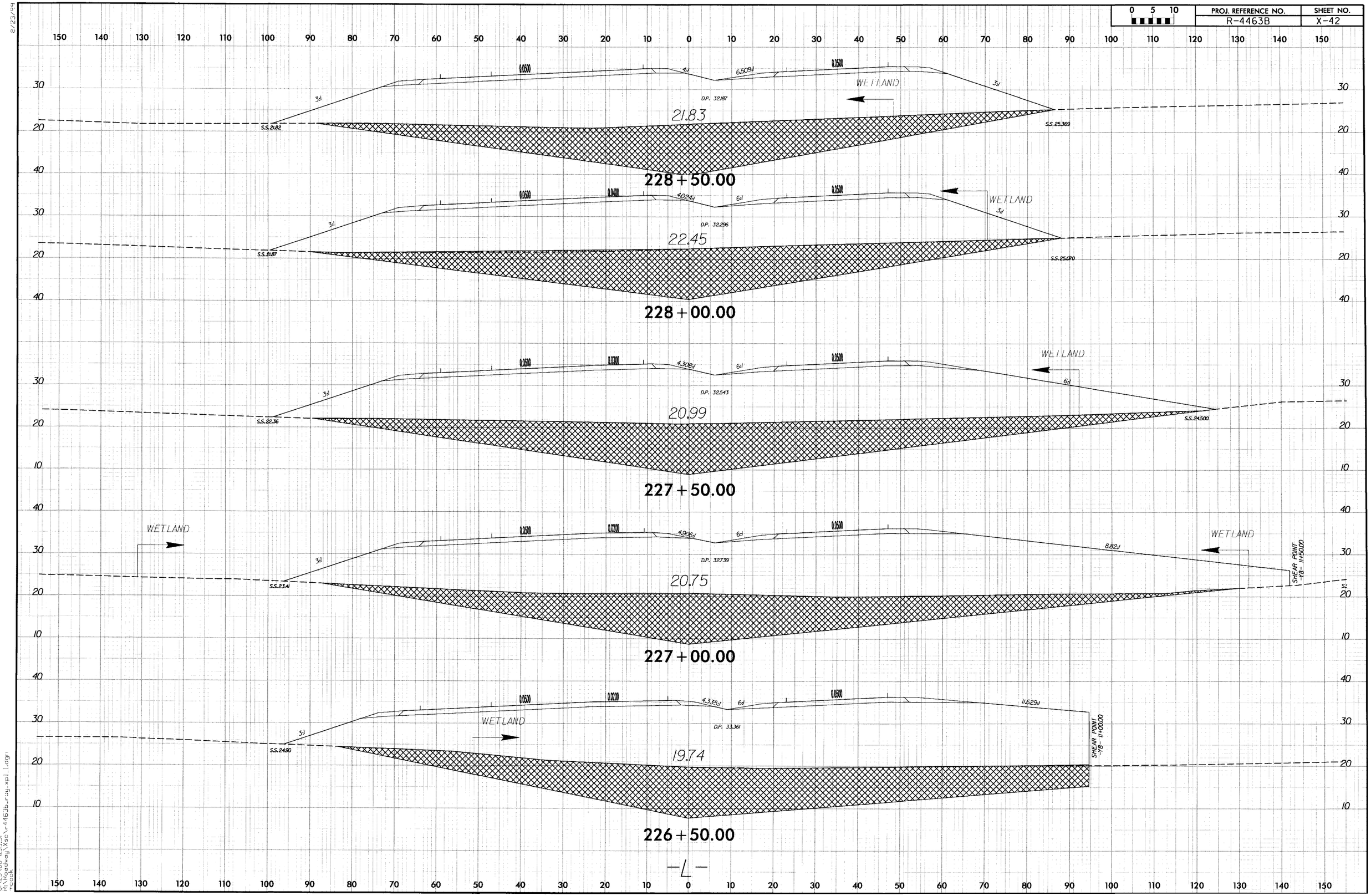
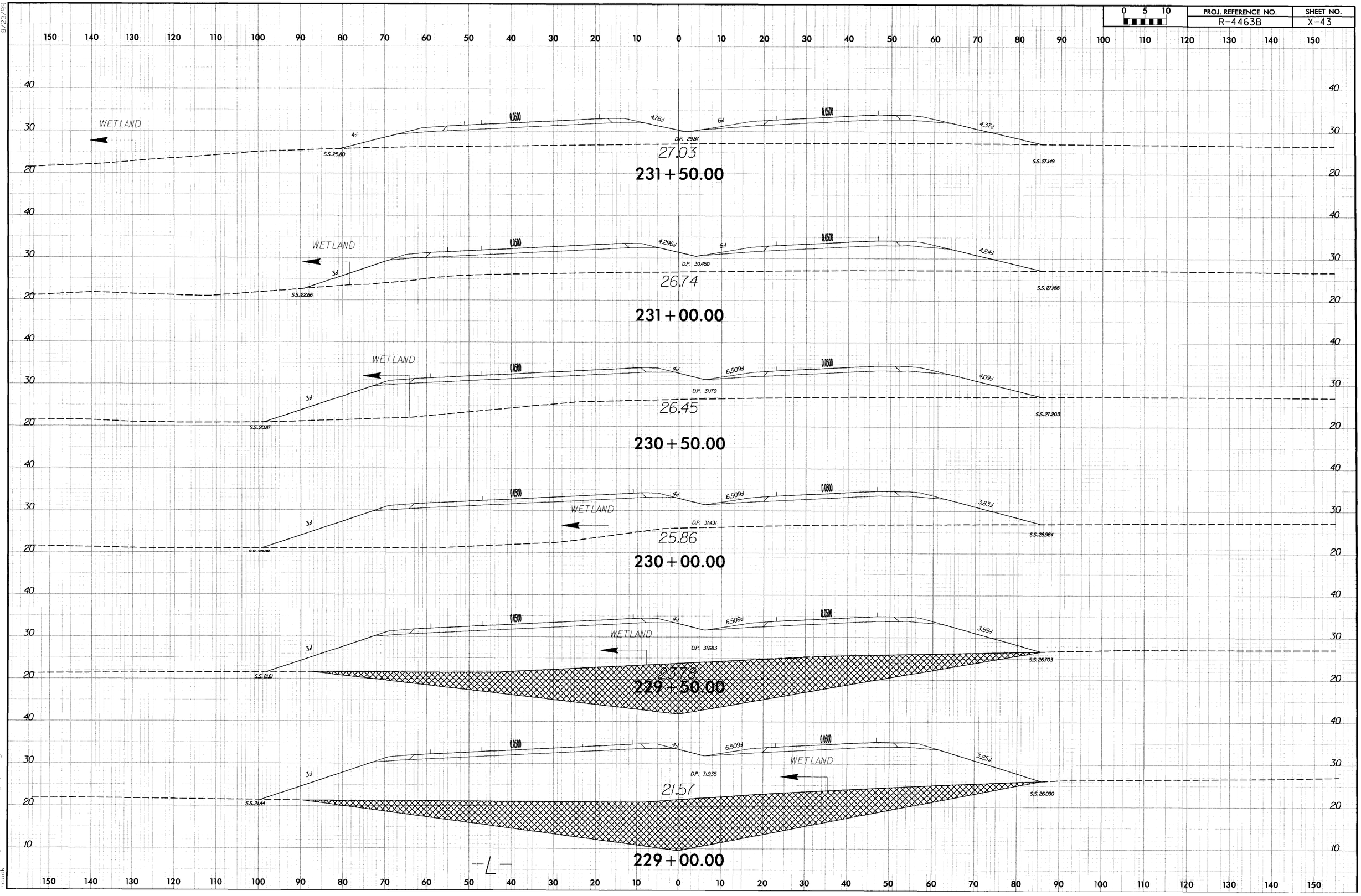
mwock


0.0500
4:1
6.509:1
0.0500
3:1
WETLAND
3:1
D.P. 32.187
21.83
S.S. 21.82
S.S. 25.369
228+50.00
0.0500
0.0400
4.024:1
6:1
0.0500
WETLAND
3:1
3:1
D.P. 32.296
22.45
S.S. 21.87
S.S. 25.070
228+00.00
0.0500
0.0300
4.308:1
6:1
0.0500
WETLAND
6:1
3:1
D.P. 32.543
20.99
S.S. 22.36
S.S. 24.500
227+50.00
WETLAND
0.0500
0.0200
4.906:1
6:1
0.0500
8.82:1
WETLAND
SHEAR POINT -18- 11+50.00
3:1
D.P. 32.739
20.75
S.S. 23.41
227+00.00
0.0500
0.0200
4.335:1
6:1
0.0500
11.629:1
WETLAND
SHEAR POINT -18- 11+00.00
3:1
D.P. 33.361
19.74
S.S. 24.90
226+50.00
-L-



PROJ. REFERENCE NO.
R-4463B
SHEET NO.
X-43
0 5 10
WETLAND
0.0500
4:1
4.76:1
6:1
4.37:1
D.P. 29.87
S.S. 25.80
S.S. 27.149
27.03
231+50.00
4.296:1
4.24:1
D.P. 30.450
3:1
S.S. 22.66
S.S. 27.188
26.74
231+00.00
6.509:1
4.09:1
D.P. 31.179
S.S. 20.87
S.S. 27.203
26.45
230+50.00
3.83:1
D.P. 31.431
S.S. 26.964
25.86
230+00.00
3.59:1
D.P. 31.683
S.S. 21.61
S.S. 26.703
229+50.00
3.25:1
D.P. 31.935
S.S. 21.44
S.S. 26.090
21.57
229+00.00
-L-

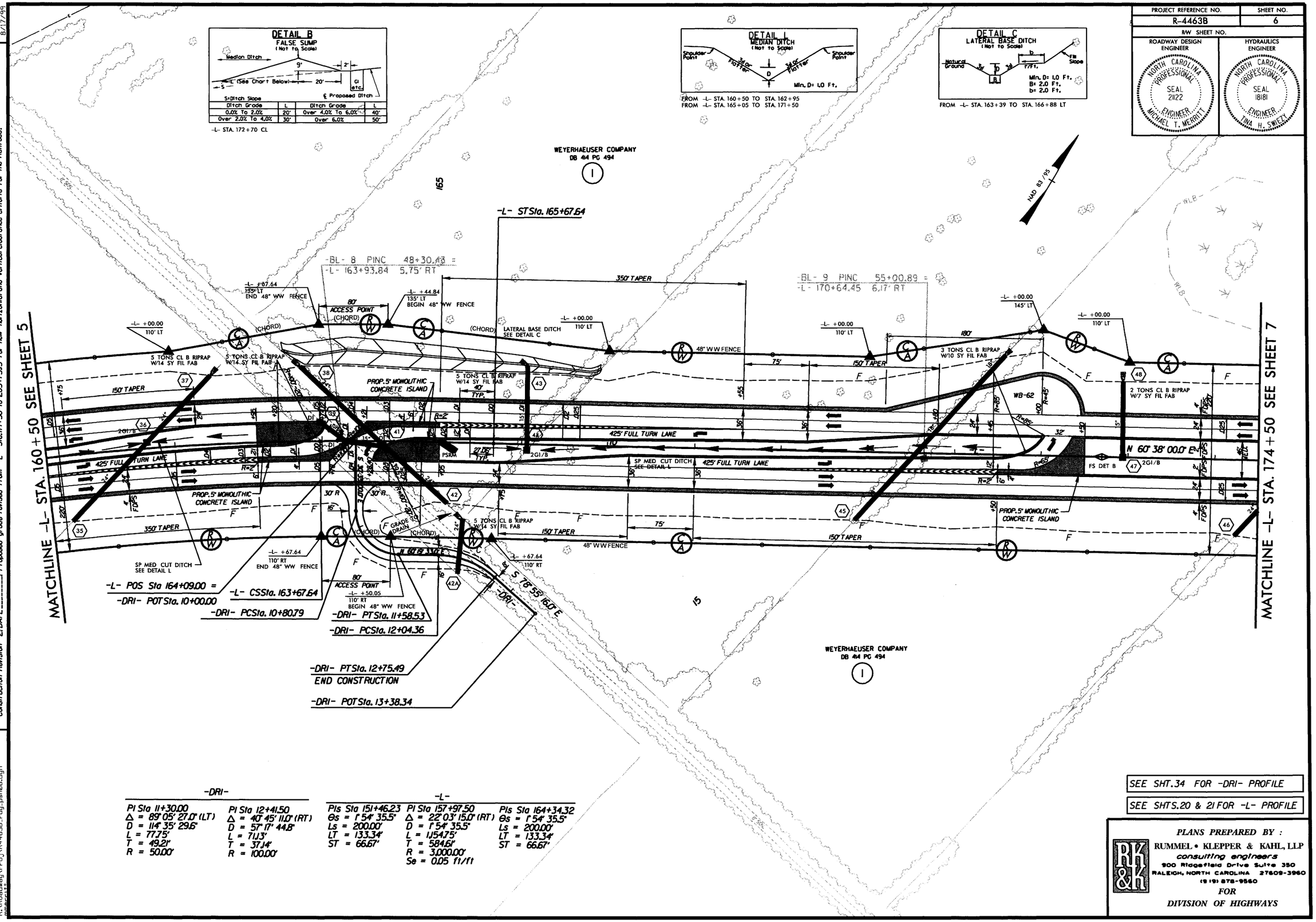
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWIEZY

REVISIONS

8/17/99 Construction Revision #2: DATE ..... Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the Railroad.



-DRI-

PI Sta 11+30.00	PI Sta 12+41.50
Δ = 89° 05' 27.0" (LT)	Δ = 40° 45' 11.0" (RT)
D = 114° 35' 29.6"	D = 57° 17' 44.8"
L = 77.75'	L = 71.13'
T = 49.21'	T = 37.14'
R = 50.00'	R = 100.00'

-L-

Pls Sta 151+46.23	PI Sta 157+97.50	Pls Sta 164+34.32
Θs = 1° 54' 35.5"	Δ = 22° 03' 15.0" (RT)	Θs = 1° 54' 35.5"
Ls = 200.00'	D = 1° 54' 35.5"	Ls = 200.00'
LT = 133.34'	L = 1,154.75'	LT = 133.34'
ST = 66.67'	T = 584.61'	ST = 66.67'
	R = 3,000.00'	
	Se = 0.05 ft/ft	

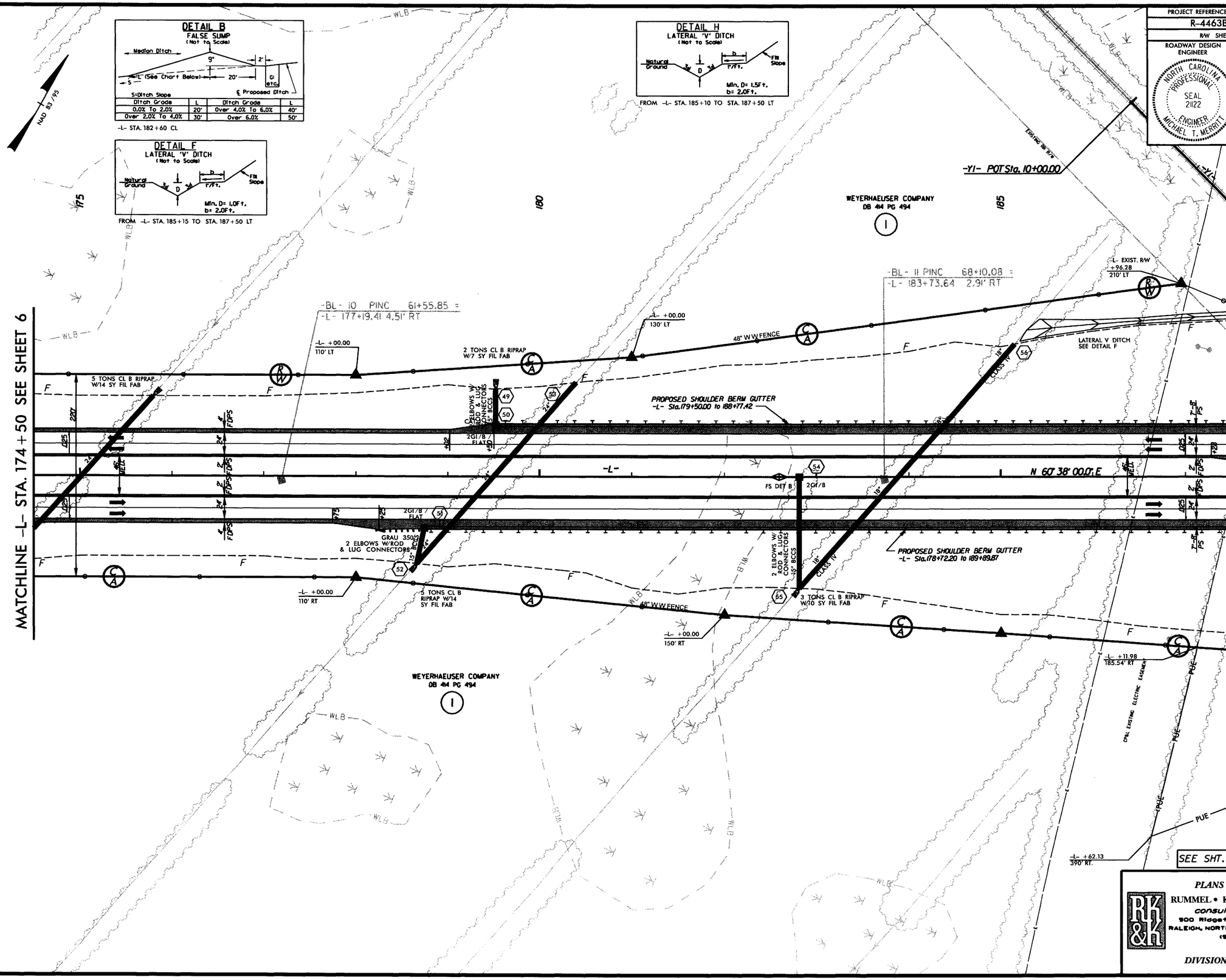
PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

2/5/2008
R:\Roadway\Proj\R4463B_rdy_psh06.dgn
mmerritt

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	7
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWEZA



PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

REVISIONS

Construction Revision #2, Date: : Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the Railroad.

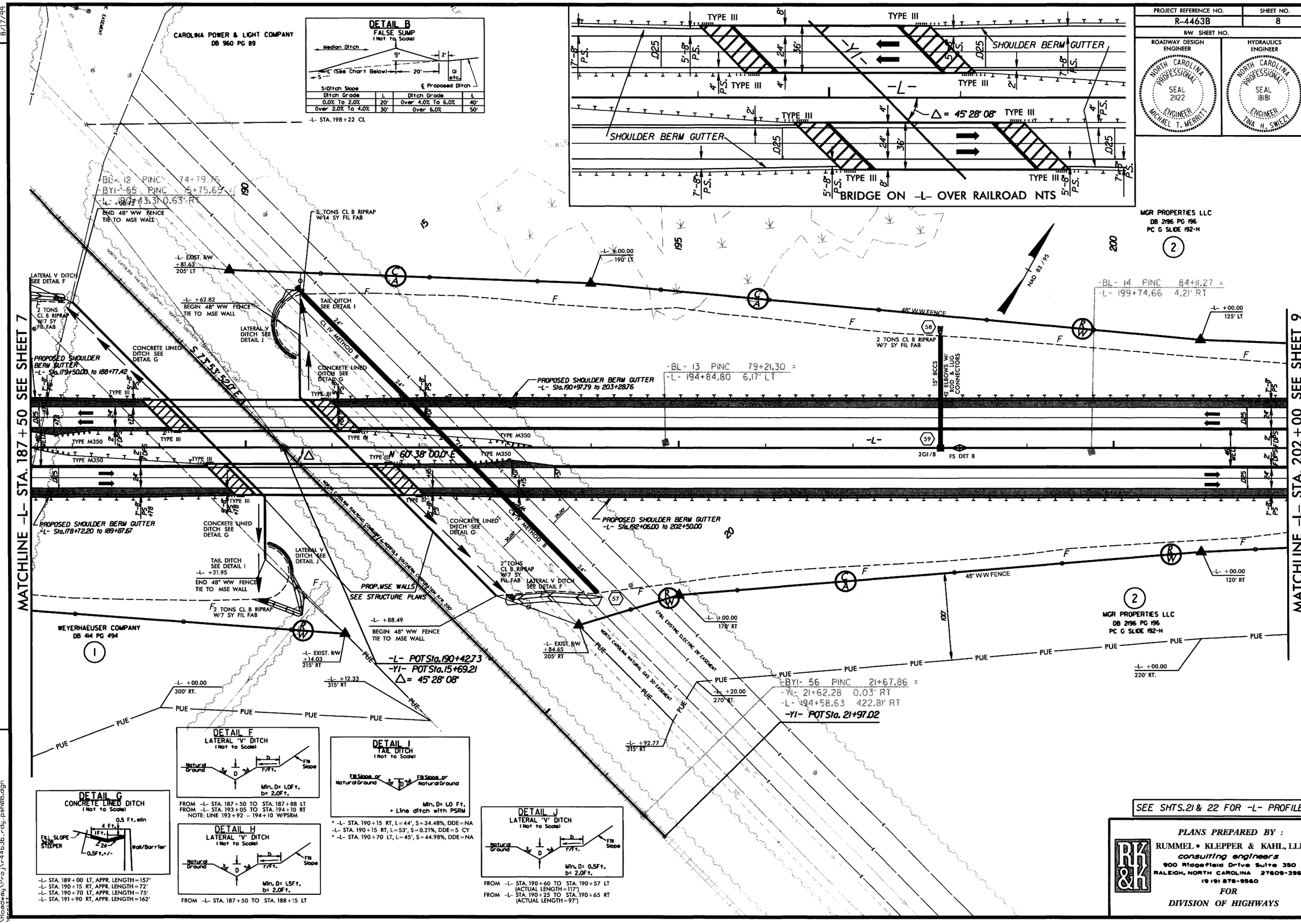
8/17/99

2/5/2008
R:\Roadway\Proj\R4463B_rdy_psh07.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	8
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWEEZY



SEE SHTS.21 & 22 FOR -L- PROFILE

PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

REVISIONS

Construction Revision #2, Date_____: Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the railroad.

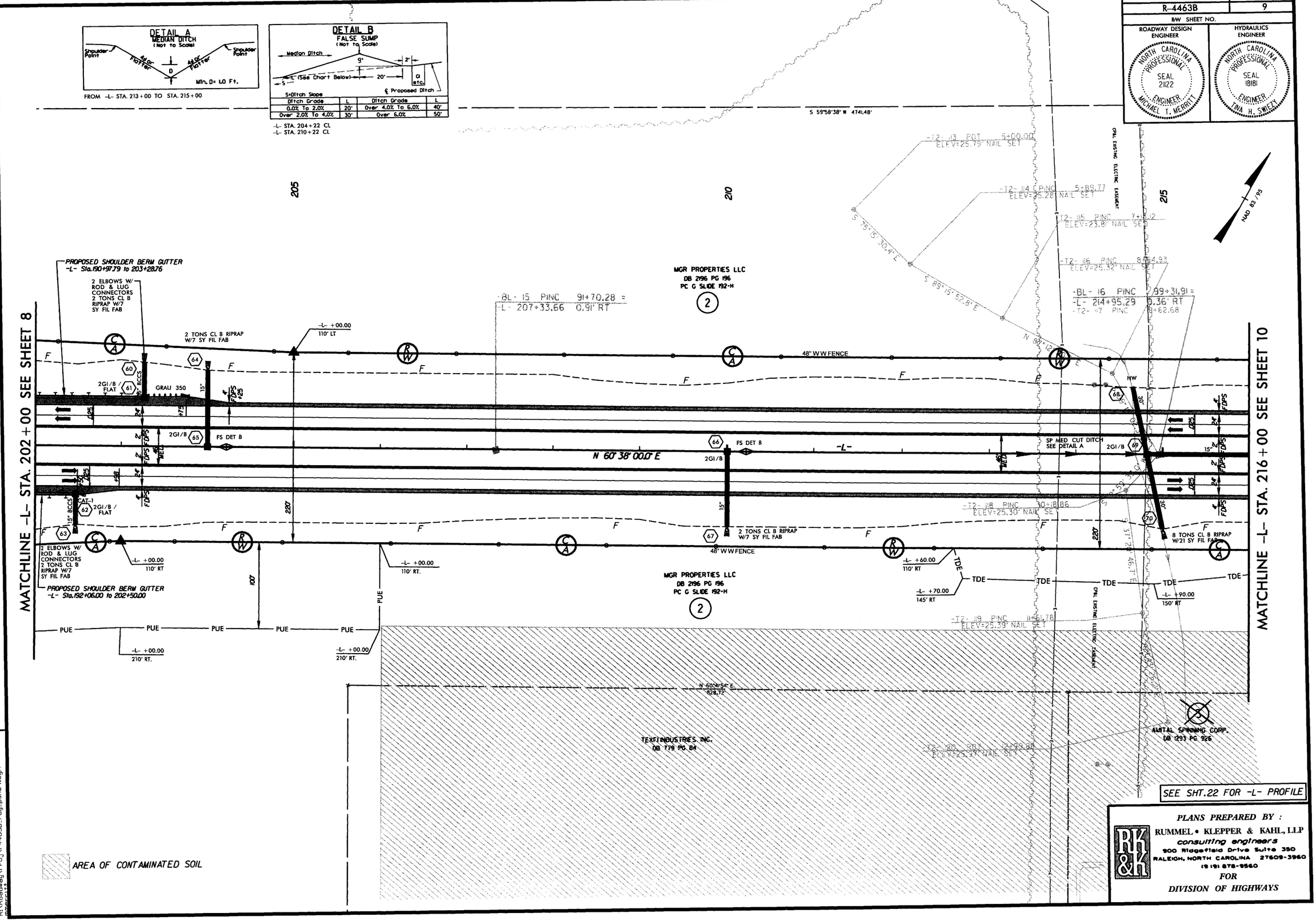
8/17/95

5/2008
\Roadway\Proj\r-4463b_rdy_psh08.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	9
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWIEZY



SEE SHT.22 FOR -L- PROFILE

PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

REVISIONS

Construction Revision #2, Date: ..... Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the railroad.

8/17/99

2/5/2008
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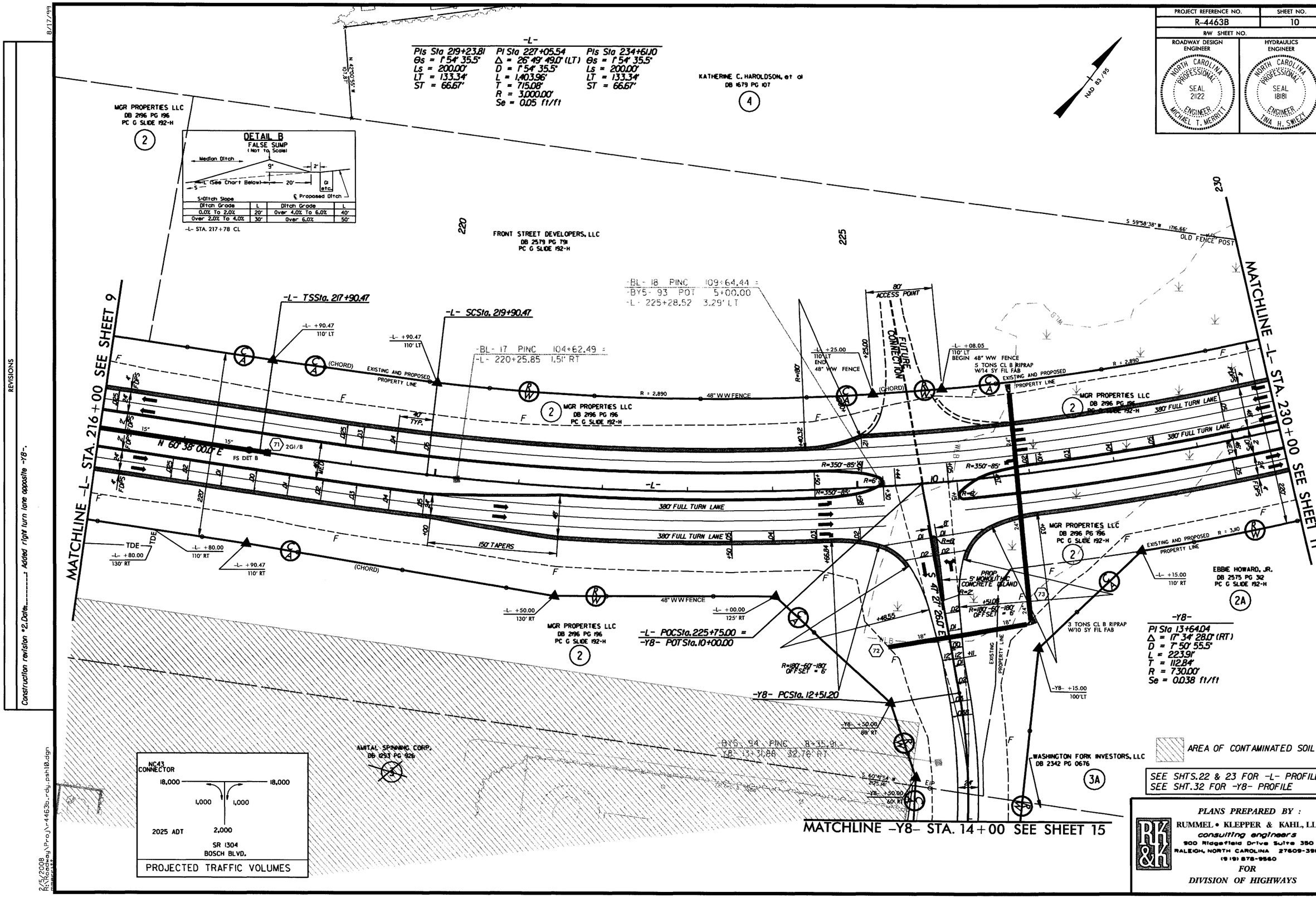
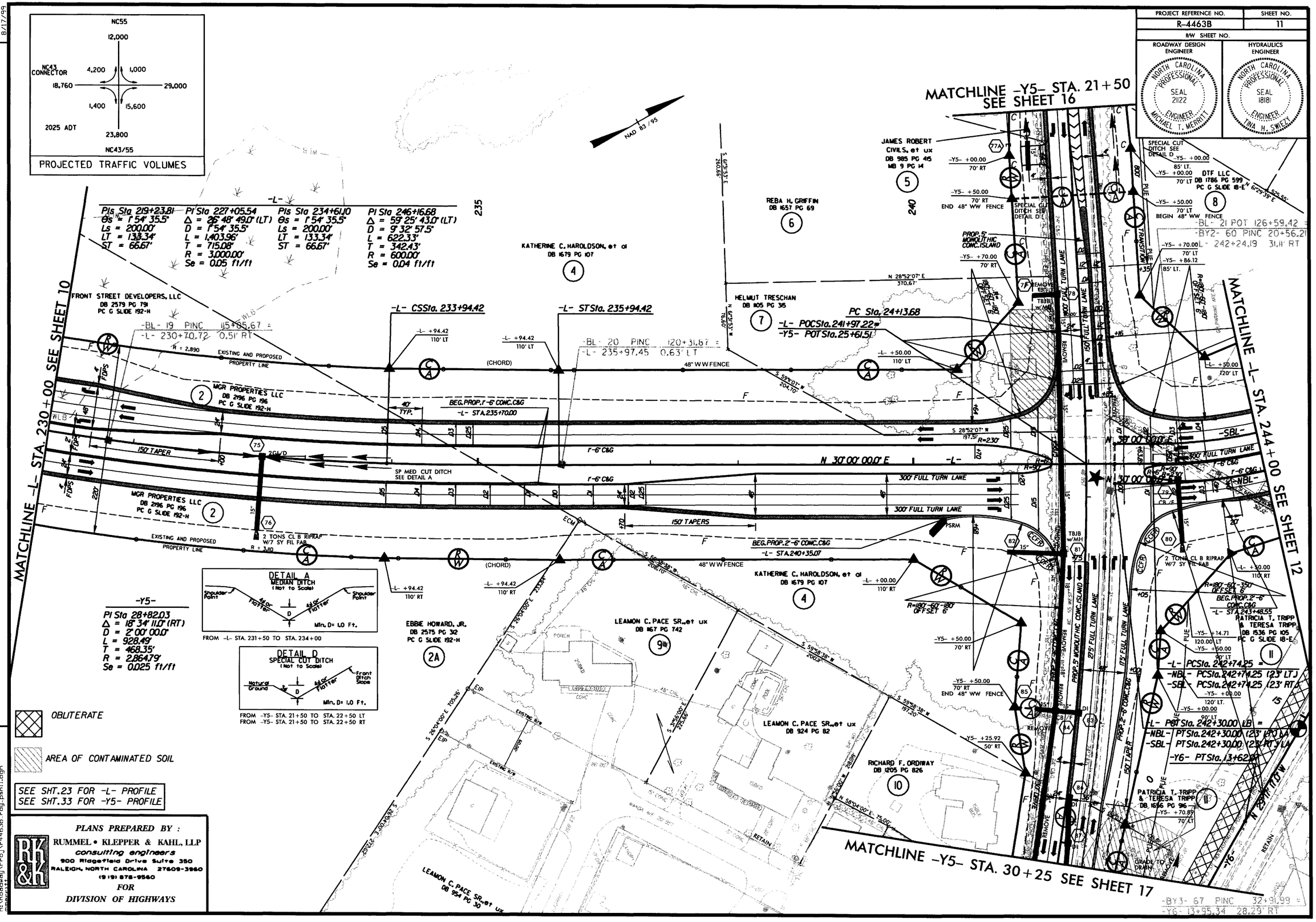


PROJECT REFERENCE NO.
R-4463B
SHEET NO.
10
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT
NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWIEZY
-L-
Pls Sta 219+23.81
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'
Pl Sta 227+05.54
Δ = 26° 49' 49.0" (LT)
D = 1° 54' 35.5"
L = 1,403.96'
T = 715.08'
R = 3,000.00'
Se = 0.05 ft/ft
Pls Sta 234+61.10
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'
KATHERINE C. HAROLDSON, et al
DB 1679 PG 107
MGR PROPERTIES LLC
DB 2196 PG 196
PC G SLIDE 192-H
DETAIL B
FALSE SUMP
(Not to Scale)
Median Ditch
(See Chart Below)
S=Ditch Slope
℄ Proposed Ditch
Ditch Grade | L | Ditch Grade | L
0.0% To 2.0% | 20' | Over 4.0% To 6.0% | 40'
Over 2.0% To 4.0% | 30' | Over 6.0% | 50'
-L- STA. 217+78 CL
FRONT STREET DEVELOPERS, LLC
DB 2579 PG 791
PC G SLIDE 192-H
S 59°58'38" W 1716.66'
OLD FENCE POST
MATCHLINE -L- STA. 230+00 SEE SHEET 11
MATCHLINE -L- STA. 216+00 SEE SHEET 9
-L- TSSta. 217+90.47
-L- SCSta. 219+90.47
-BL- 18 PINC 109+64.44 =
-BY5- 93 POT 5+00.00
-L- 225+28.52 3.29' LT
-BL- 17 PINC 104+62.49 =
-L- 220+25.85 1.51' RT
80' ACCESS POINT
FUTURE CONNECTION
EXISTING AND PROPOSED PROPERTY LINE
R = 2,890
48" WW FENCE
N 60° 38' 00.0" E
FS DET B
380' FULL TURN LANE
150' TAPERS
-L- POCSta. 225+75.00 =
-Y8- POTSta. 10+00.00
-Y8- PCSta. 12+51.20
-Y8-
Pl Sta 13+64.04
Δ = 17° 34' 28.0" (RT)
D = 7° 50' 55.5"
L = 223.91'
T = 112.84'
R = 730.00'
Se = 0.038 ft/ft
EBBIE HOWARD, JR.
DB 2575 PG 312
PC G SLIDE 192-H
3 TONS CL B RIPRAP W/10 SY FIL FAB
WASHINGTON FORK INVESTORS, LLC
DB 2342 PG 0676
AMITAL SPINNING CORP.
DB 1293 PG 926
MATCHLINE -Y8- STA. 14+00 SEE SHEET 15
AREA OF CONTAMINATED SOIL
SEE SHTS.22 & 23 FOR -L- PROFILE
SEE SHT.32 FOR -Y8- PROFILE
NC43 CONNECTOR
18,000
1,000
2,000
2025 ADT
SR 1304
BOSCH BLVD.
PROJECTED TRAFFIC VOLUMES
PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS
REVISIONS
Construction revision #2, Date: Added right turn lane opposite -Y8-.
8/17/99
2/5/2008
R:\Roadway\Proj\r4463b_rdy_psh10.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT	NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWIEZY

PROJECTED TRAFFIC VOLUMES



PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
consulting engineers
900 Ridgefield Drive Suite 350
RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

REVISIONS

Construction revision #2, Date:_____: Added right turn lane opposite -Y8-.

8/17/99

2/5/2008
R:\Roadway\Proj\r4463b_rdy_psh11.dgn
mmerritt

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	20

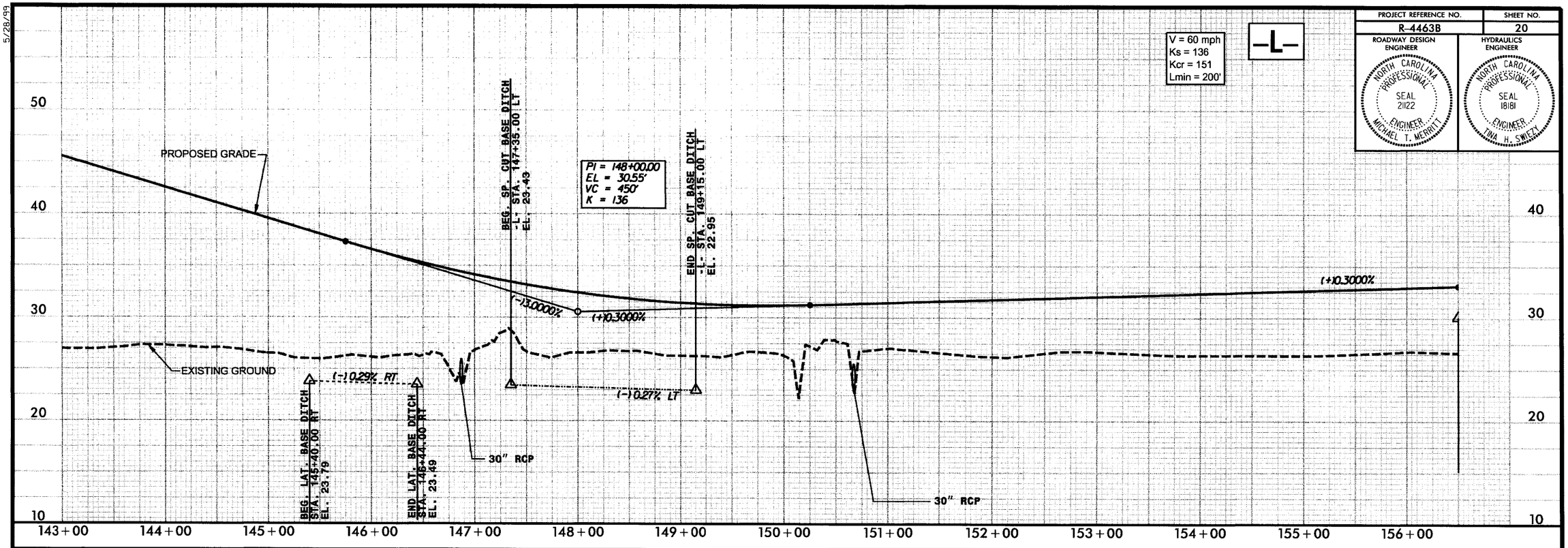
ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

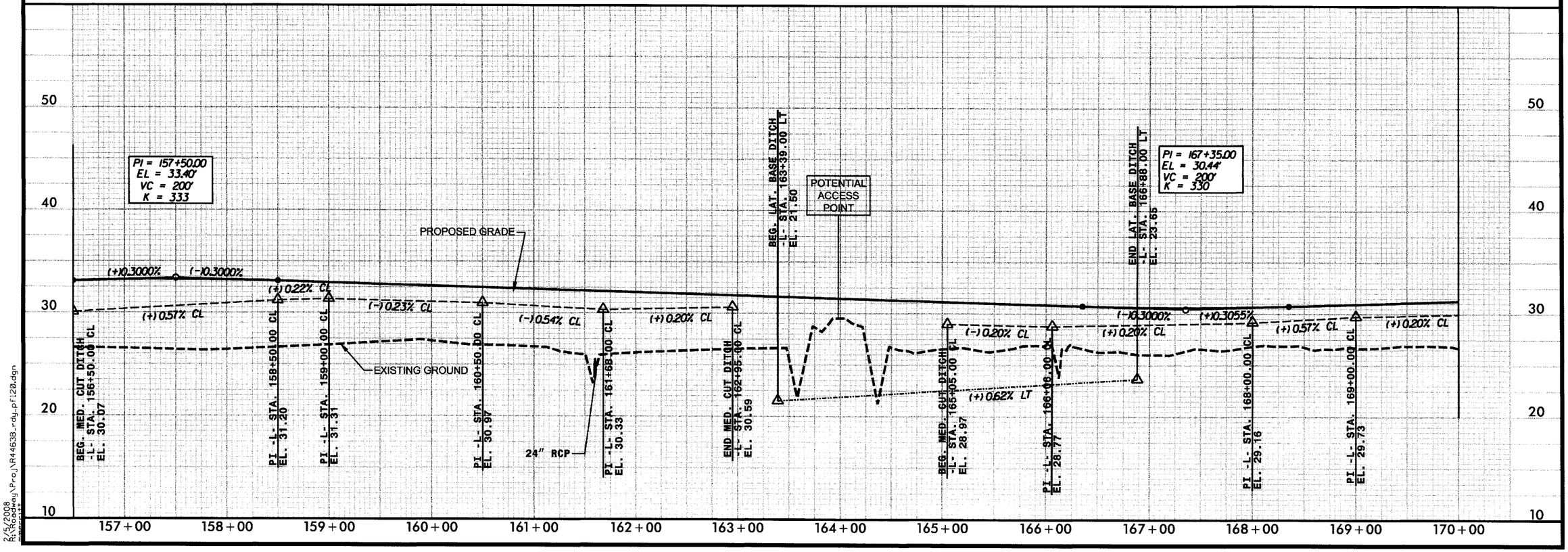
HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWIZZY

5/28/99

V = 60 mph
Ks = 136
Kcr = 151
Lmin = 200'

-L-





Construction Revision #2, Date_____ Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the railroad.

2/3/2008
R:\Roadway\Proj\R4463B_rdy_pf120.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	21

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWIEZY

5/28/99

-L-

V = 60 mph
Ks = 136
Kcr = 151
Lmin = 200'

PI = 172+50.00
EL = 32.01'
VC = 200'
K = 284

PI = 177+42.27
EL = 33.52'
K = 148
VC = 400'

END MED. CUT DITCH
-L- STA. 171+50.00 CL
EL. 30.23

PROPOSED GRADE

(+)0.20% CL

(+)0.3056%

(+)3.0000%

WETLAND

18" RCP

24" RCP

EXISTING GROUND

24" RCP

50 40 30 20

170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00

PI = 190+40.00
EL = 72.45'
VC = 910'
K = 152

(+)3.0000%

(-)3.0000%

70 60 50 40 30 20

PROPOSED GRADE

-L- POT Sta.190+42.73 =
-Y1- PT Sta.15+69.21

-Y1-

TAIL DITCH
-L- STA. 190+70.00 LT
S=42.76%, L=45'
BEG. EL. 39.50
END EL. 20.26

CONC. LINED DITCH
-L- STA. 189+00.00 LT
L=157'

TAIL DITCH
-L- STA. 190+15.00 RT
S=34.48%, L=44'
BEG. EL. 39.10
END EL. 23.93
PI
S=0.21%, L=53'
BEG. EL. 23.93
END EL. 23.82

CONC. LINED DITCH
-L- STA. 191+90.00 RT
L=162'

CONC. LINED DITCH
-L- STA. 190+15.00 RT
L=44'

BEG. LAT. V DITCH
STA. 190+25.00 RT
EL. 23.97

LAT. V DITCH
-L- STA. 190+60.00 LT
S=0.30%, L=85'
BEG. EL. 24.50
END EL. 24.25
PI
S=14.67%, L=22'
BEG. EL. 24.25
END EL. 20.26

BEG. LAT. V DITCH
-L- STA. 185+15.00 LT
EL. 23.10

END LAT. V DITCH
-L- STA. 187+88.00 LT
EL. 23.50

EXISTING GROUND

END LAT. V DITCH
STA. 190+65.00 RT
EL. 23.82

24" RCP
CL IV
METHOD B

BEG. LAT. V DITCH
STA. 193+05.00 RT
EL. 24.50

PI STA. 193+92.00 RT
EL. 24.24

(-)21.33% RT

(-)0.30% RT

END LAT. V DITCH
STA. 194+10.00 RT
EL. 20.40

18" RCP
CL IV

(+)0.15% LT

CONC. LINED DITCH
-L- STA. 190+70.00 LT
L=75'

(-)0.15% RT
ACTUAL LENGTH=97'

50 40 30 20

184+00 185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00 193+00 194+00 195+00 196+00 197+00

Construction Revision #2 Date_____: Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the railroad.

2/5/2008
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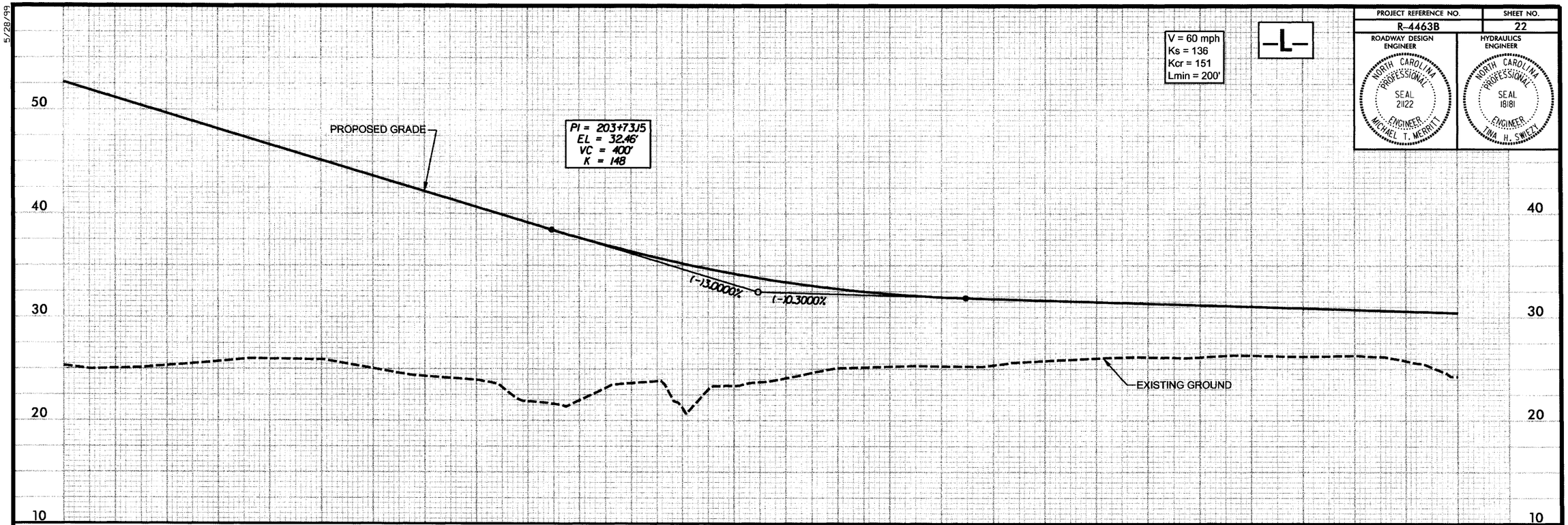
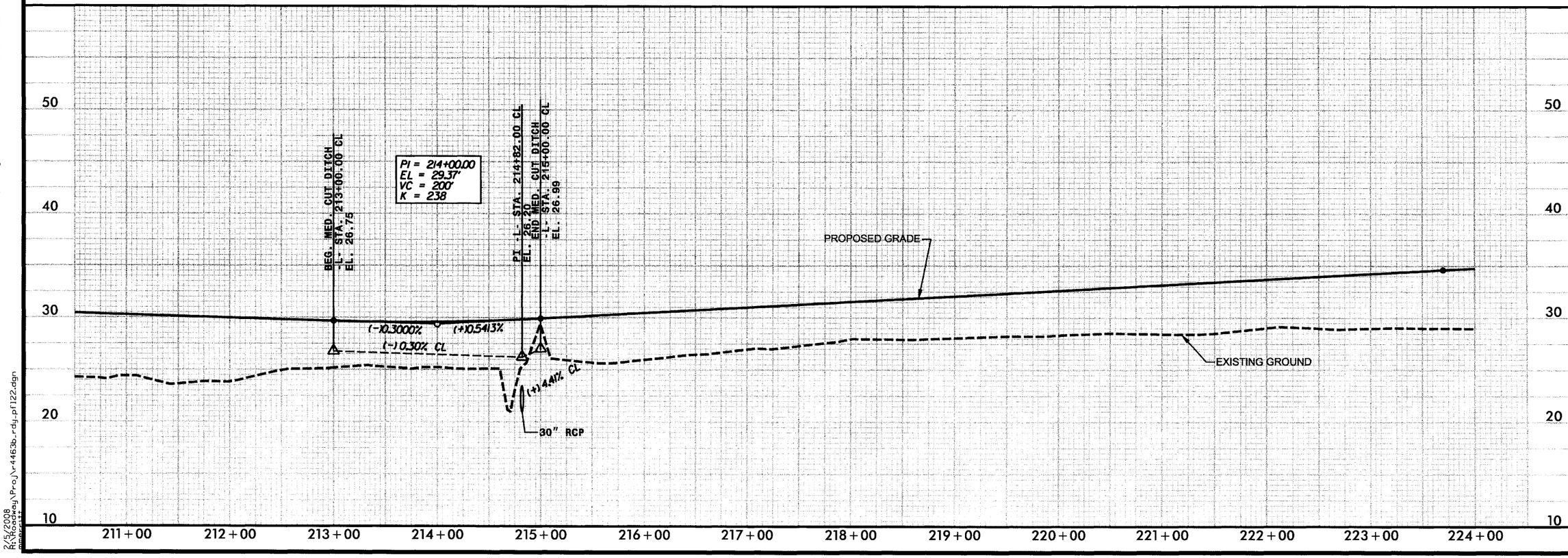
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	22

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWIZZY





Construction Revision #2, Date_____: Proposed grade revised from -L- Sta.171+50 to 205+73.15 for new horizontal and vertical clearance criteria for the railroad.

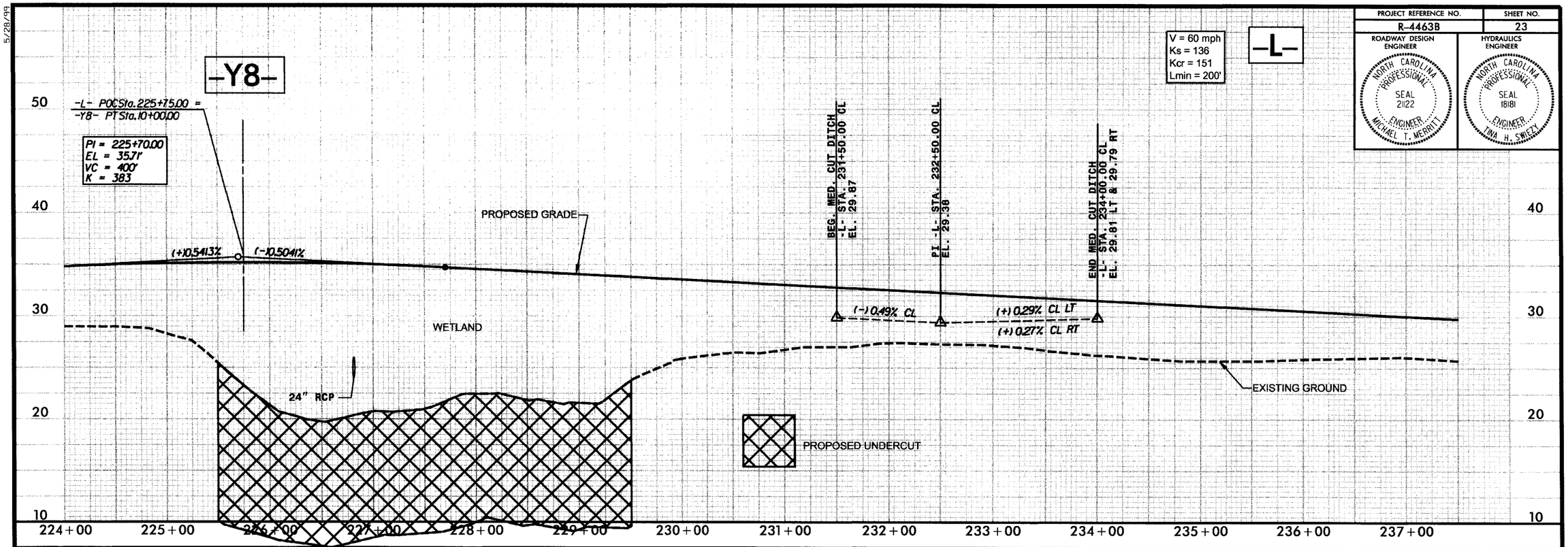
5/28/99

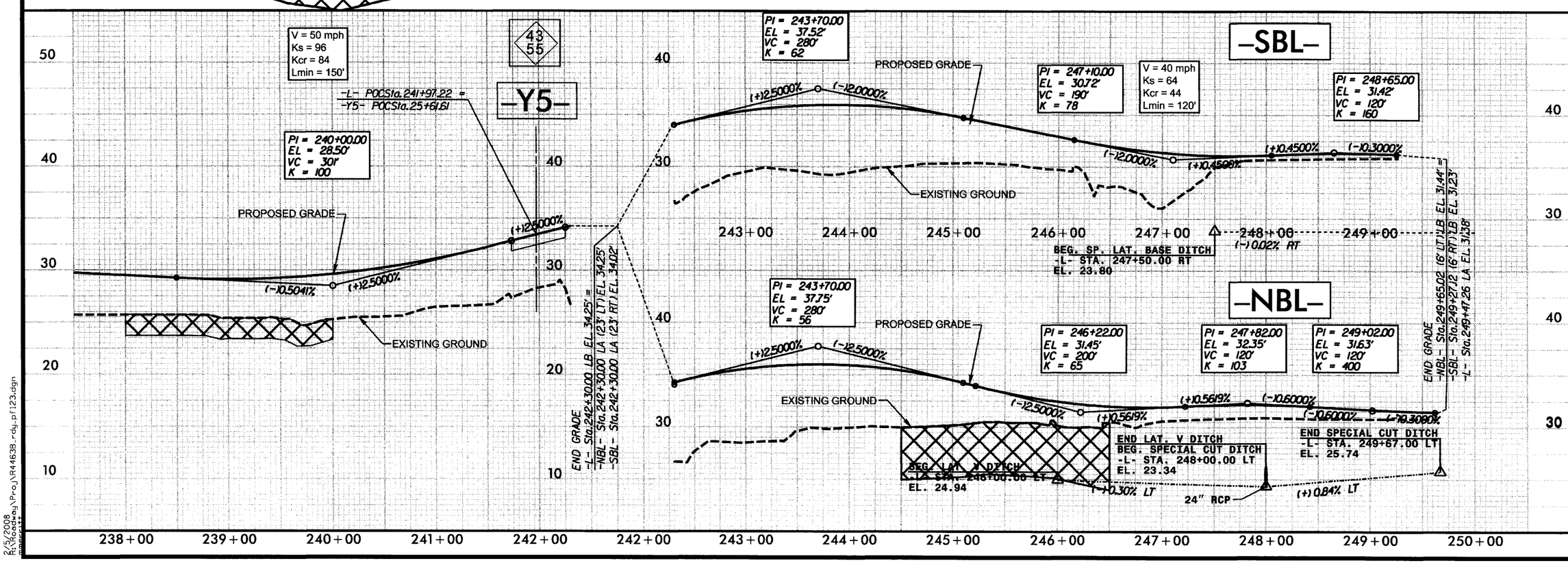
2/5/2008
R:\Roadway\Proj\r4463b_rdy_pf122.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	23
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 21122 ENGINEER MICHAEL T. MERRITT

NORTH CAROLINA PROFESSIONAL SEAL 18181 ENGINEER TINA H. SWITZY





Construction Revision #2 Date _____: Added right turn lane opposite -Y8-.

5/28/99

2/5/2008
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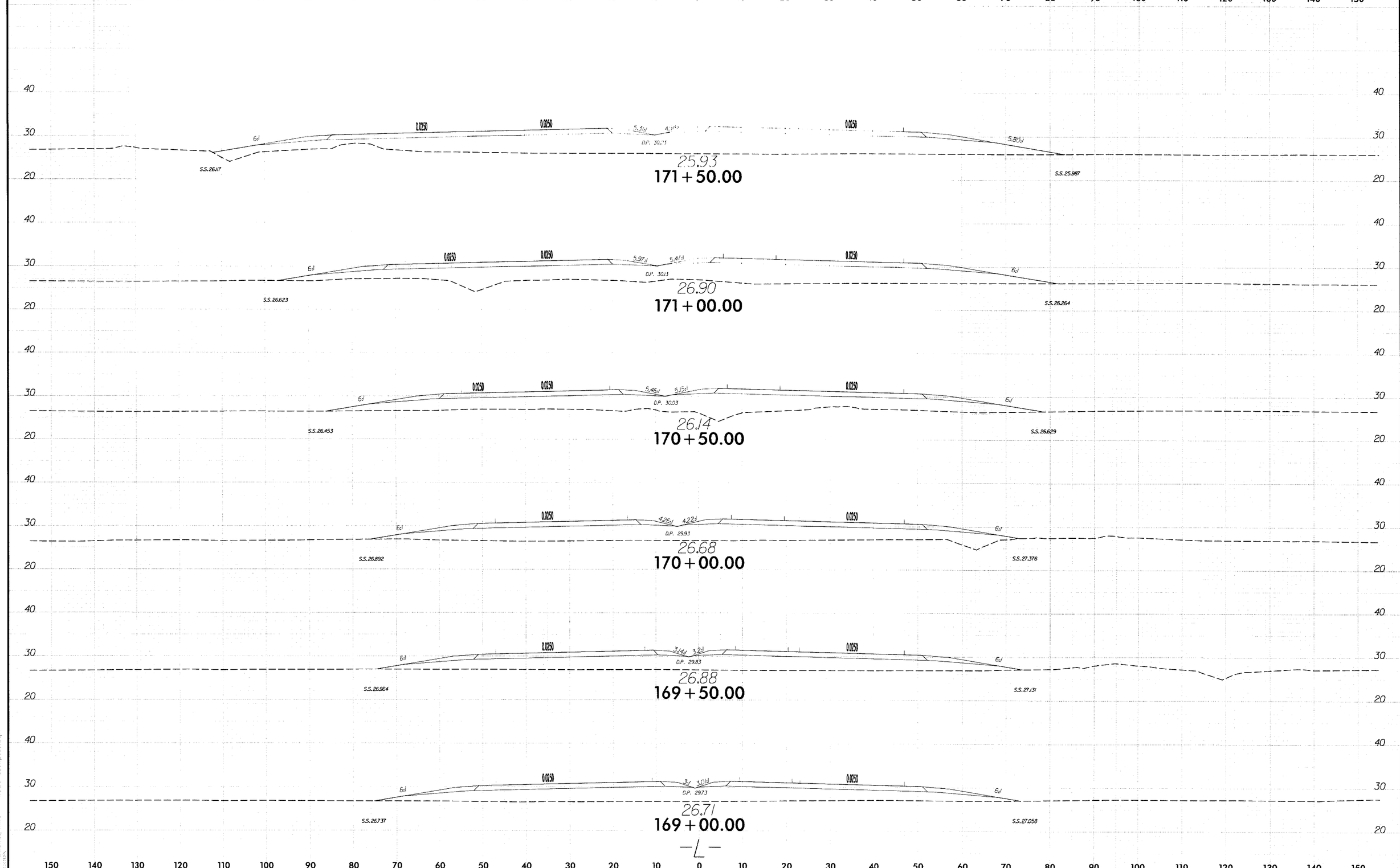
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-18



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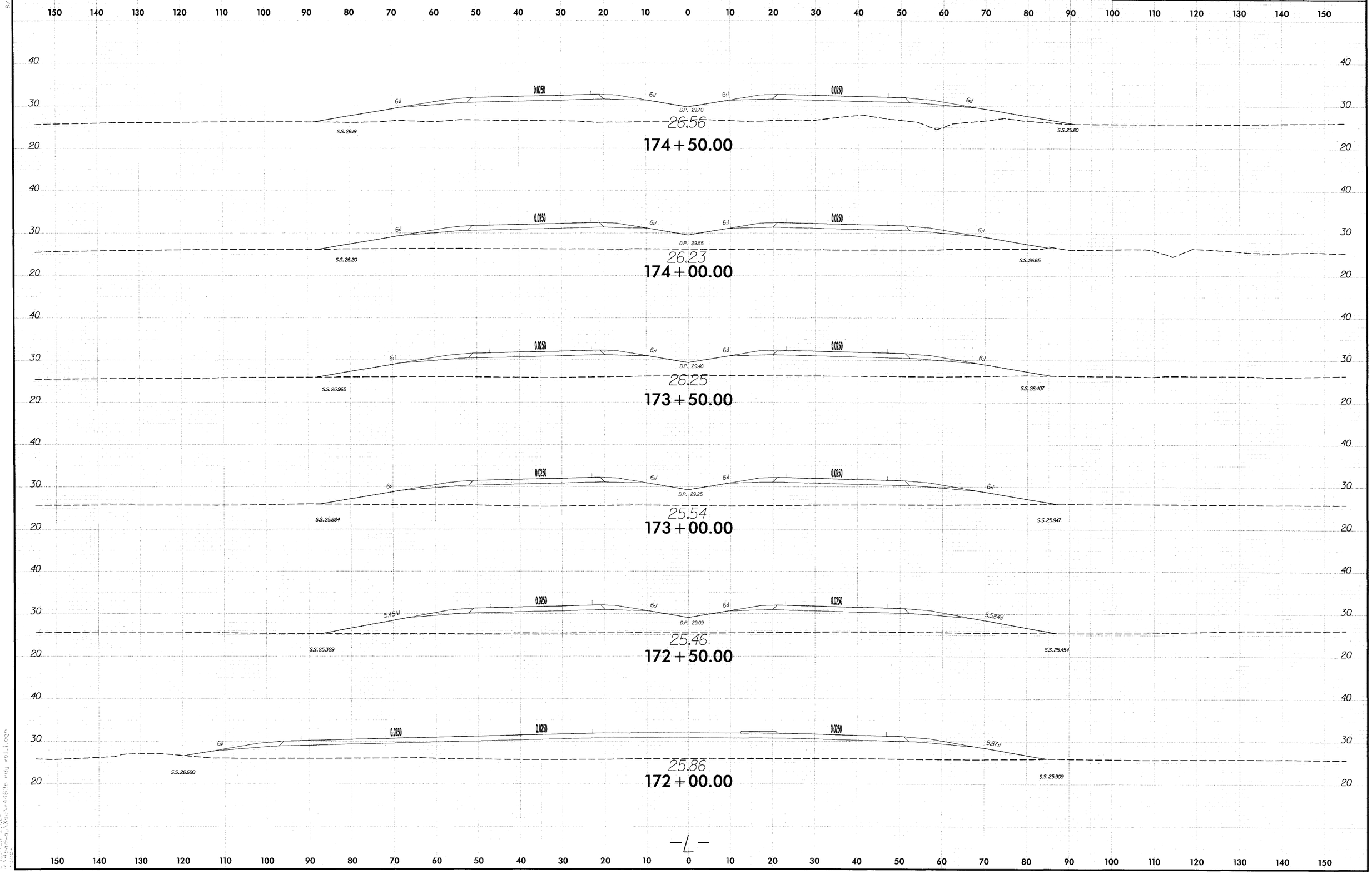
	R-4463B	X-19



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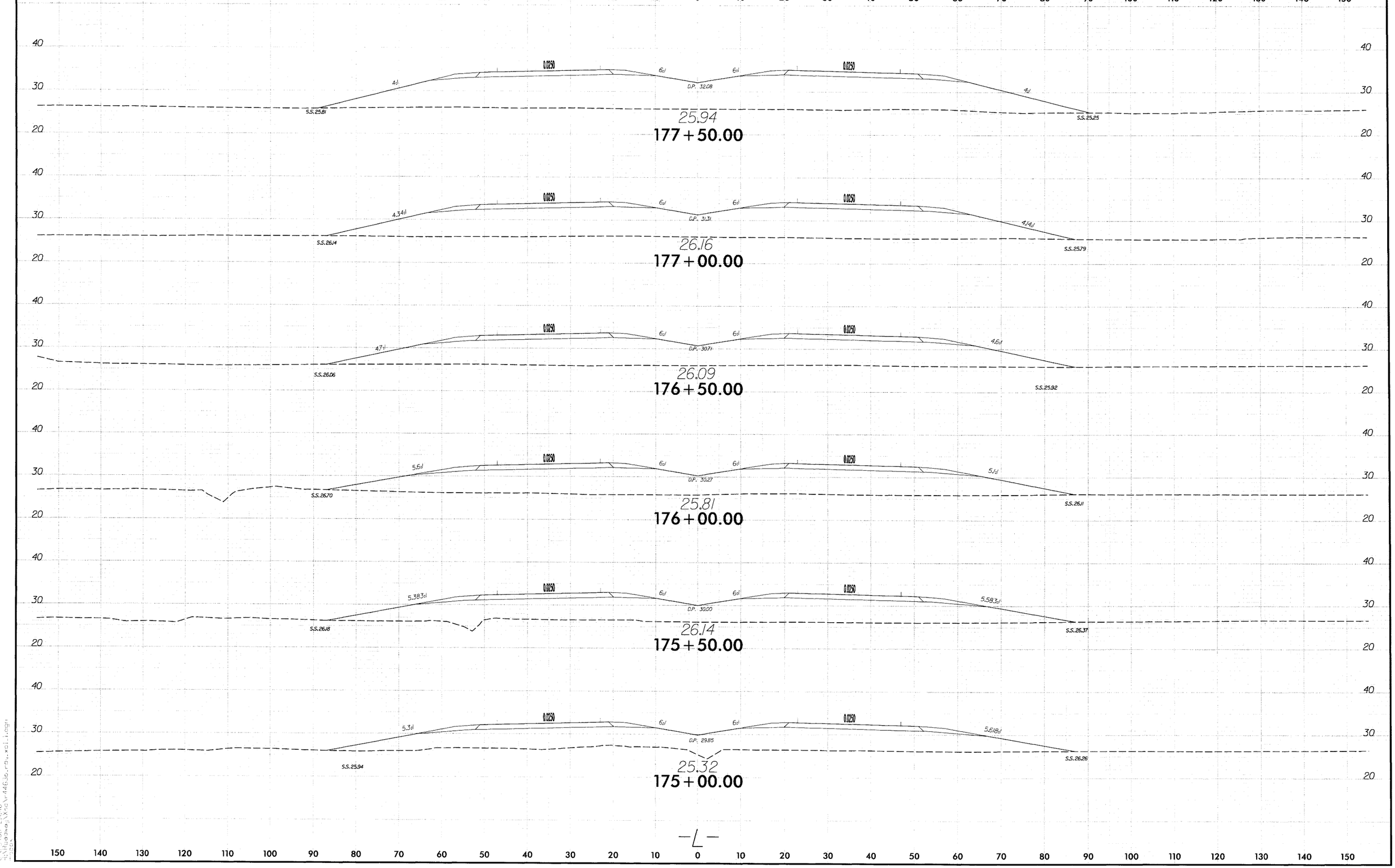

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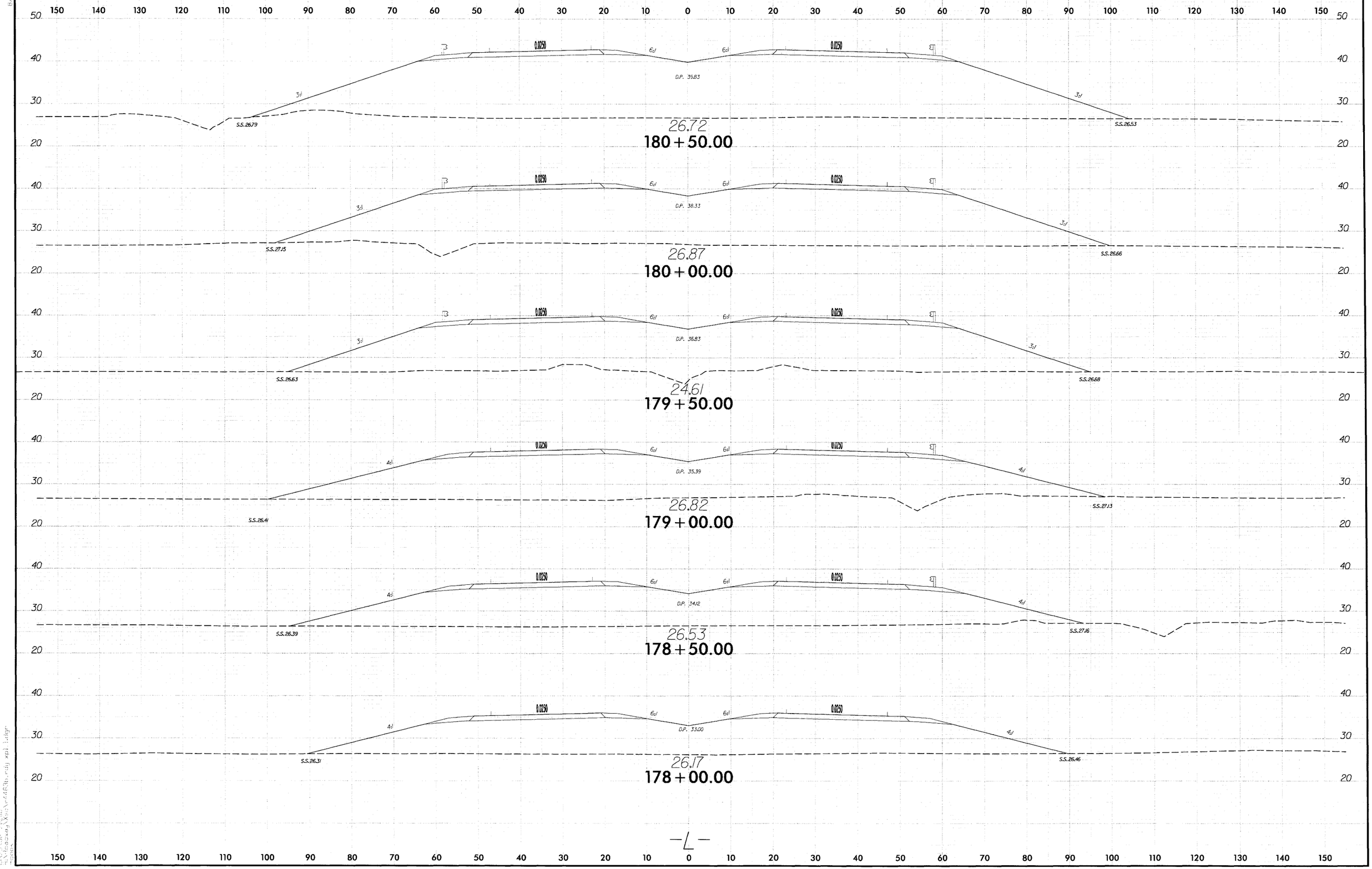

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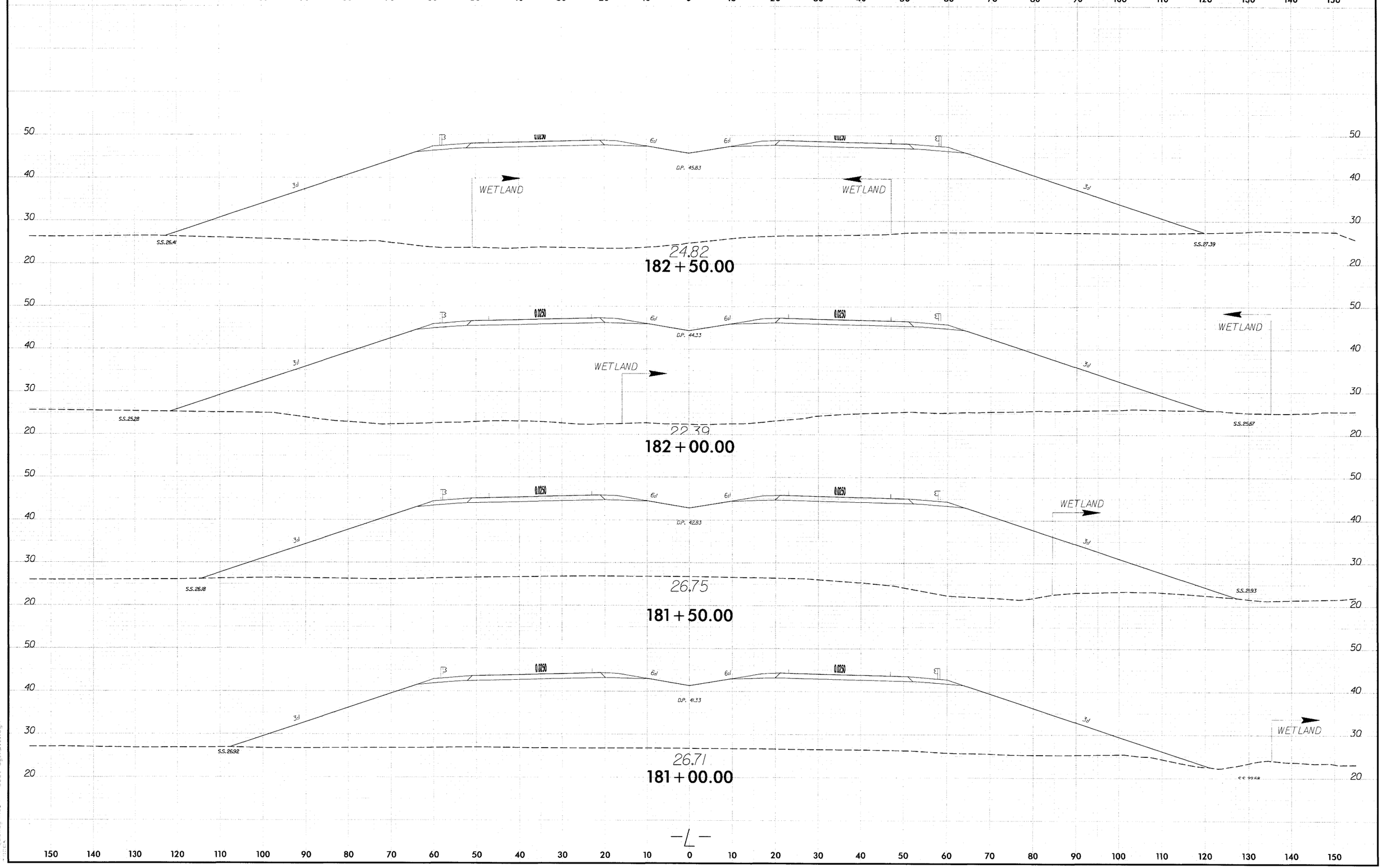

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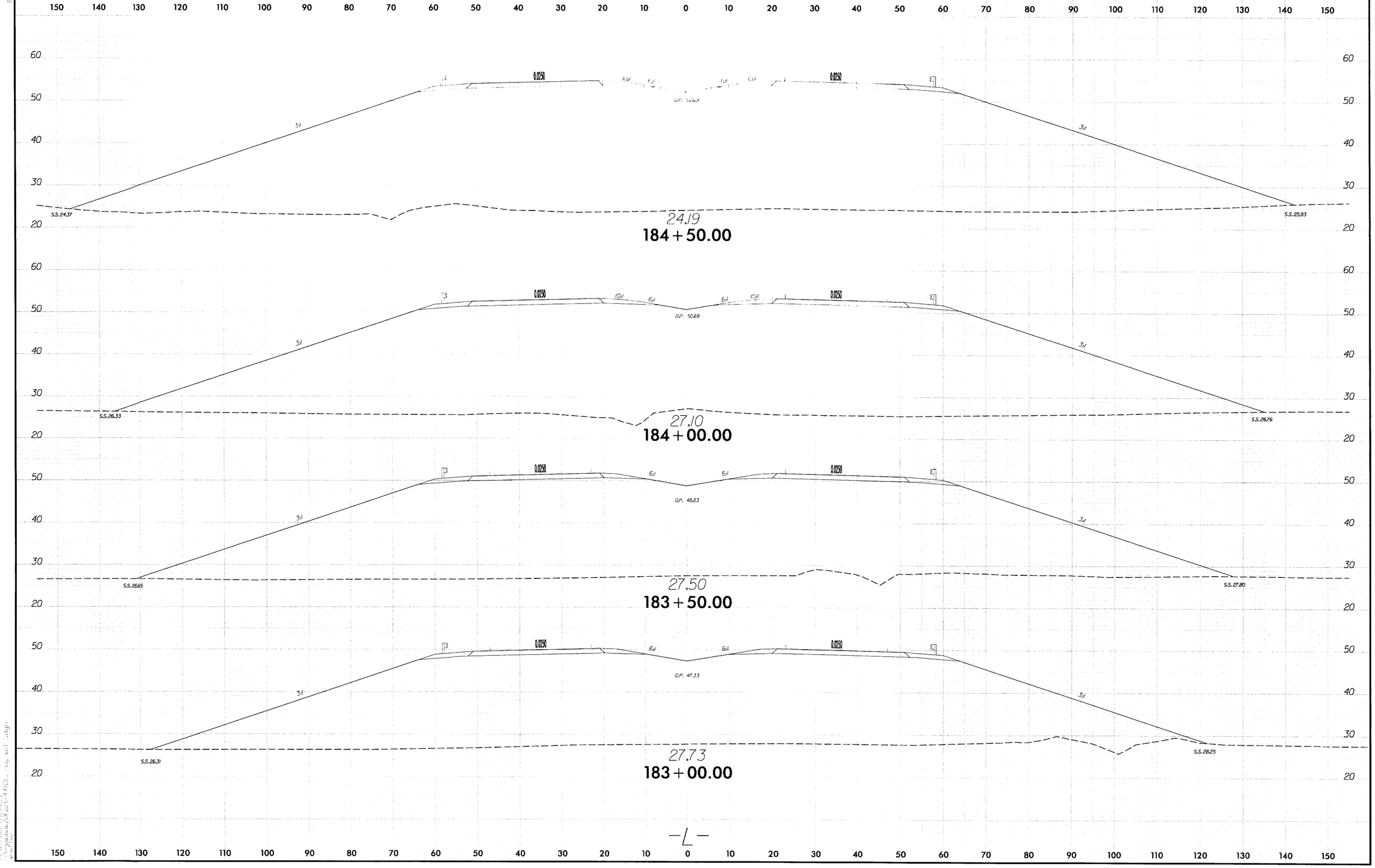

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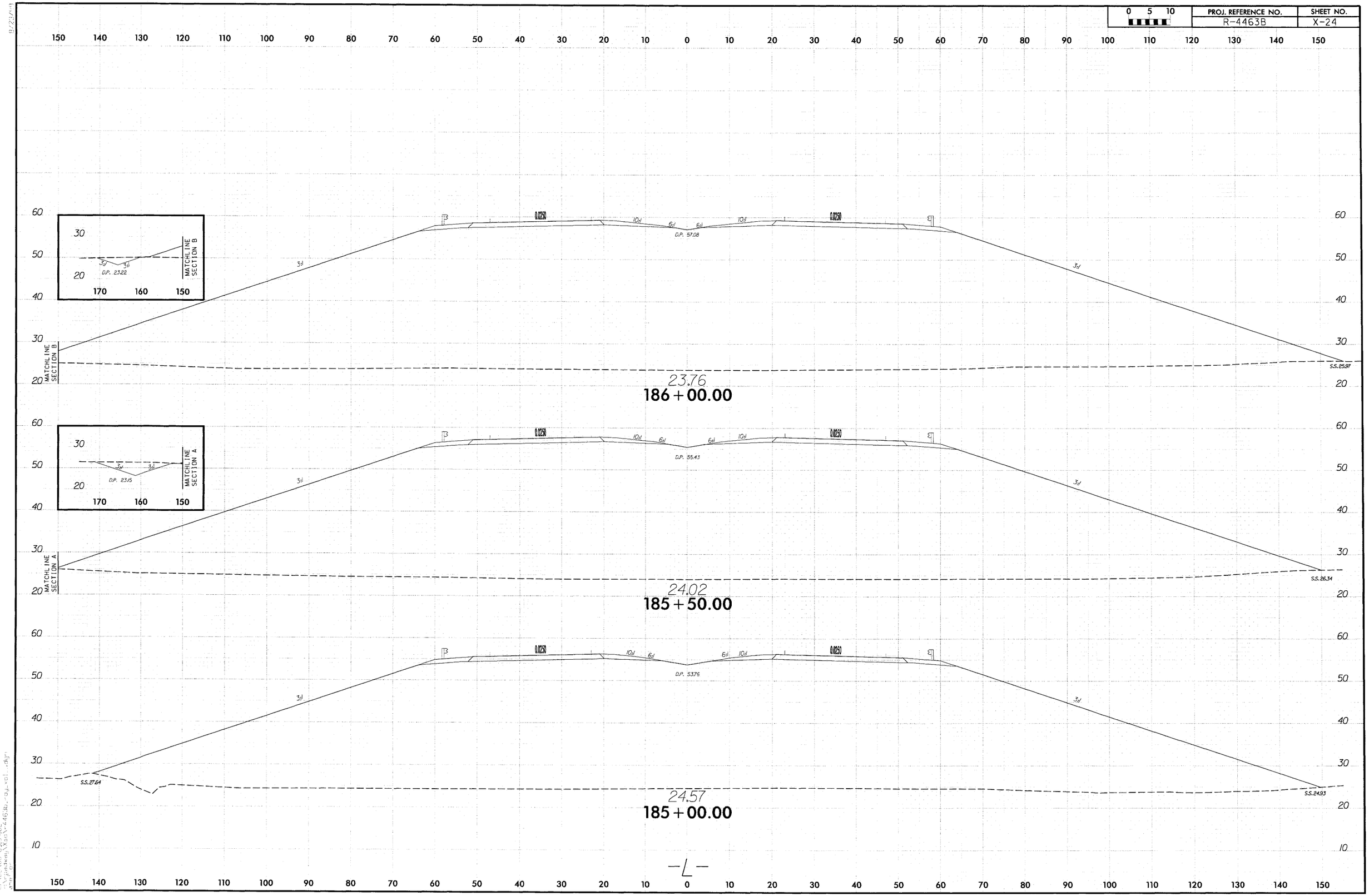

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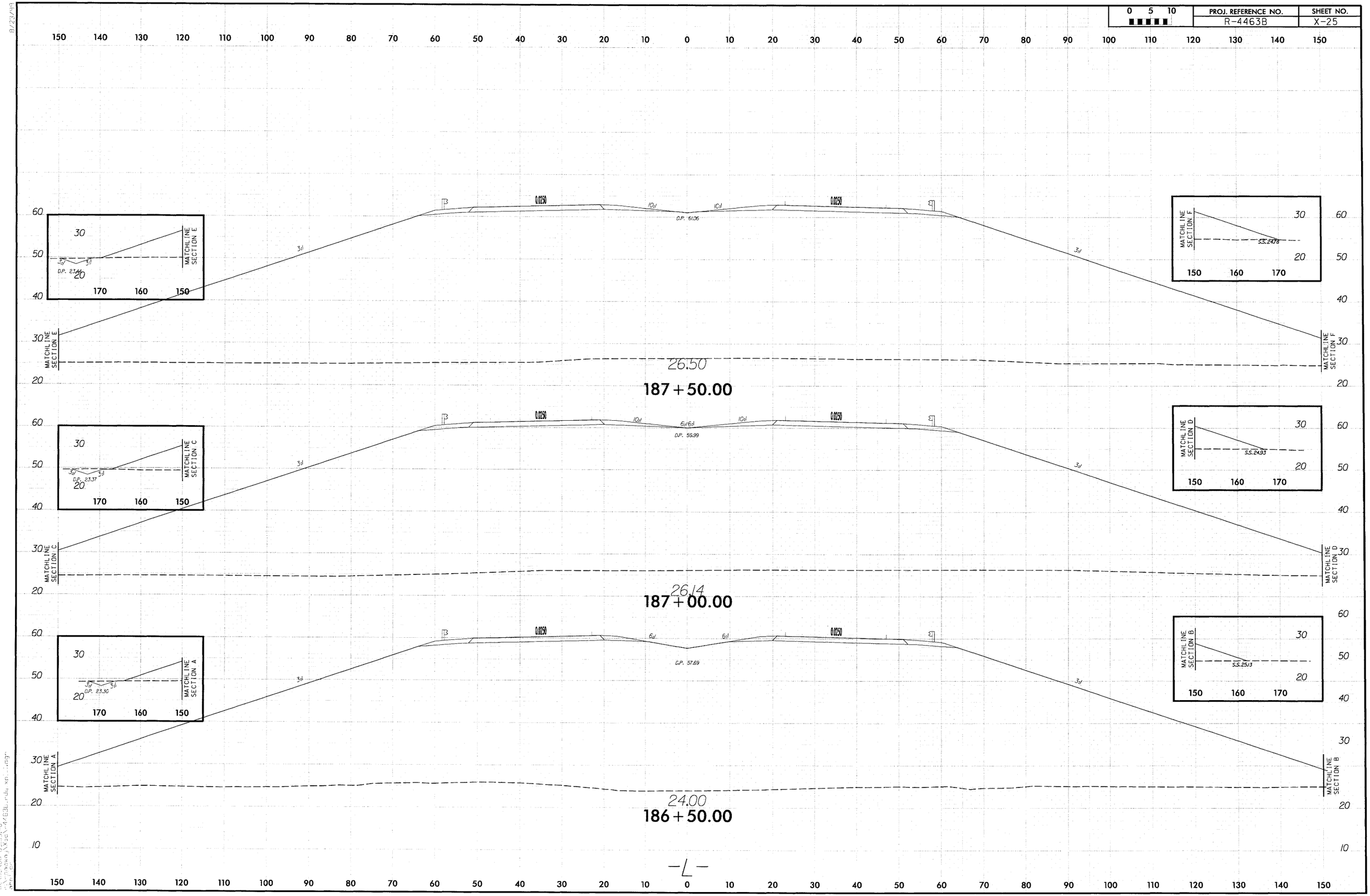

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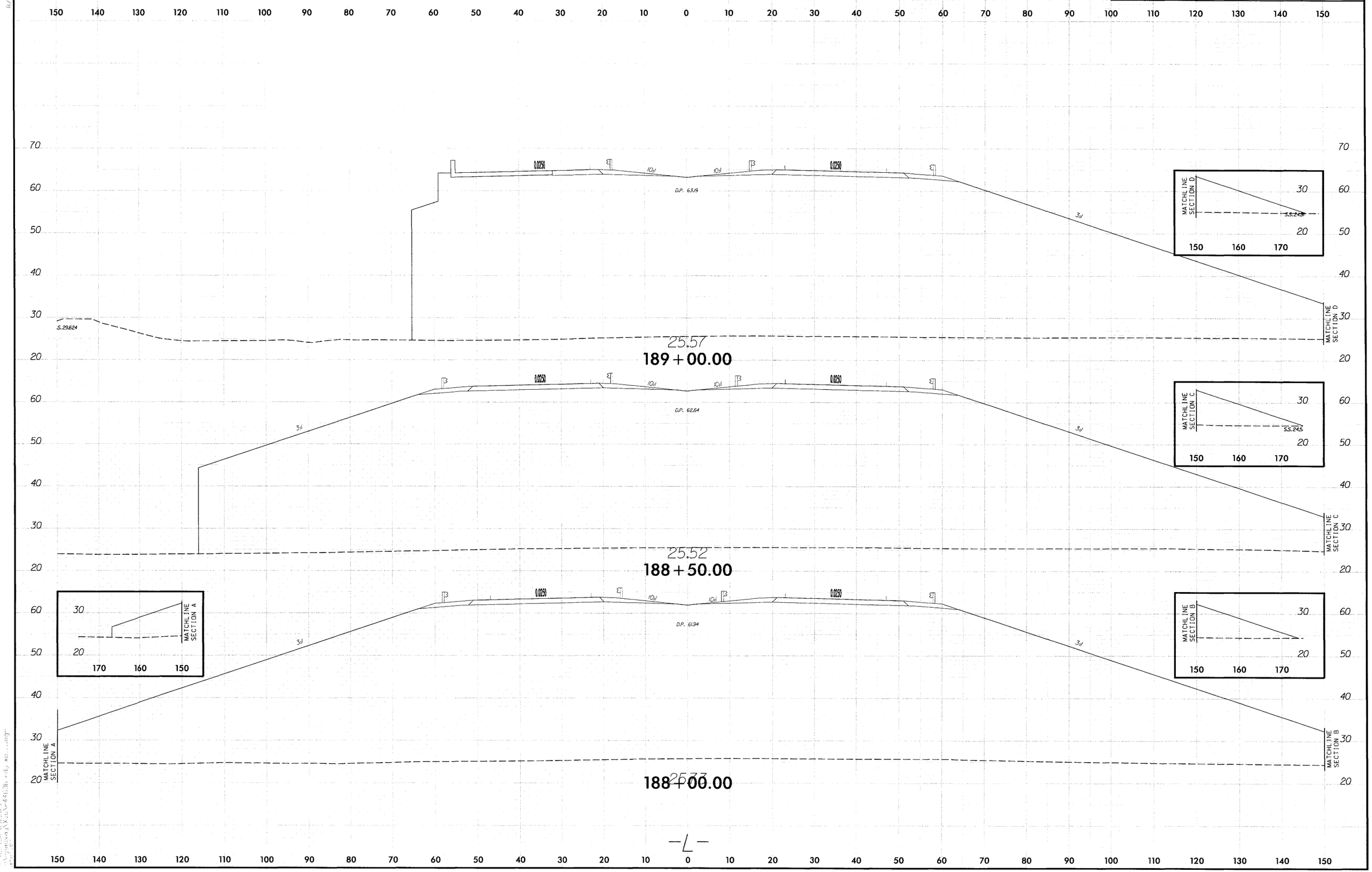

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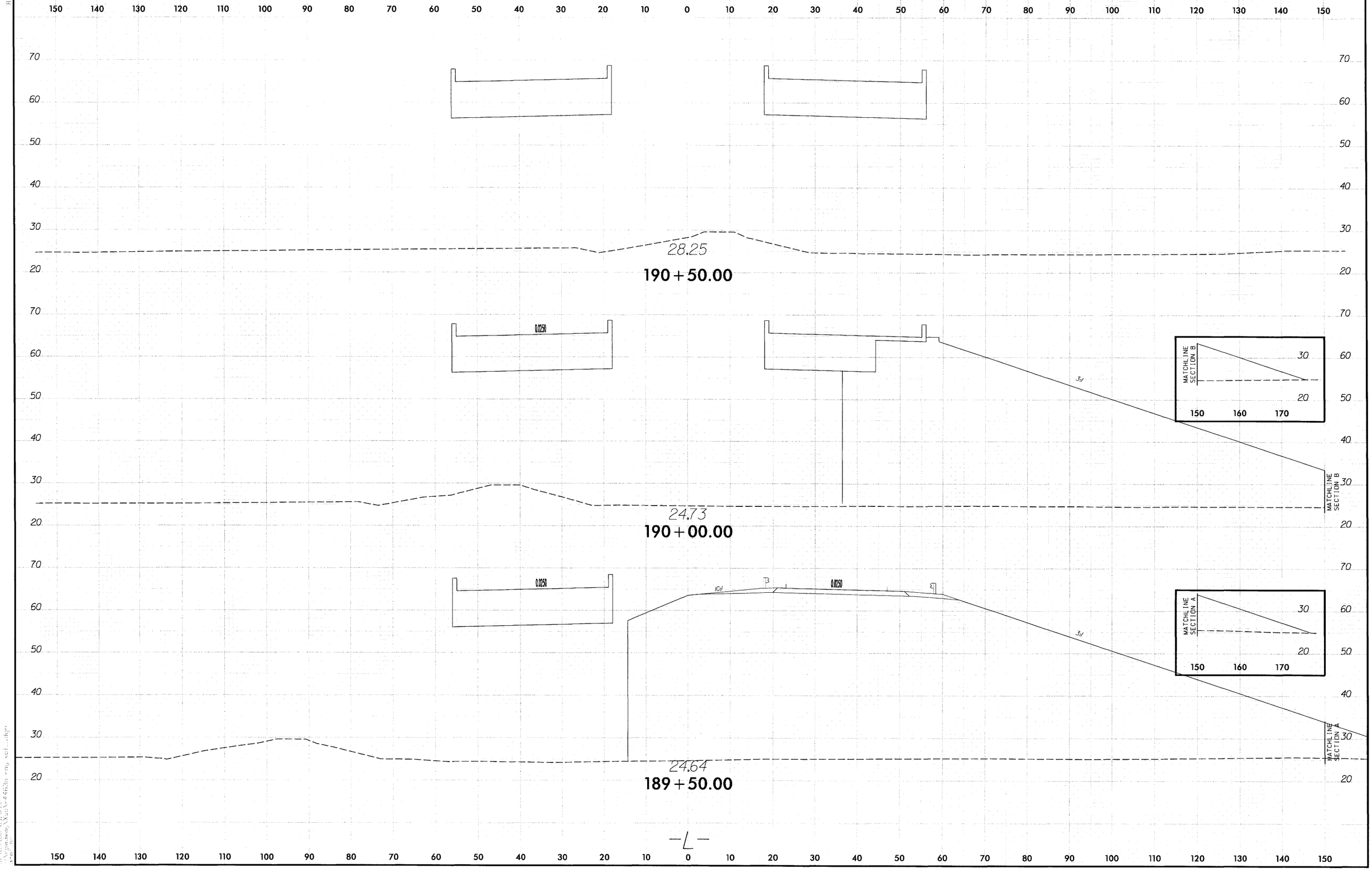

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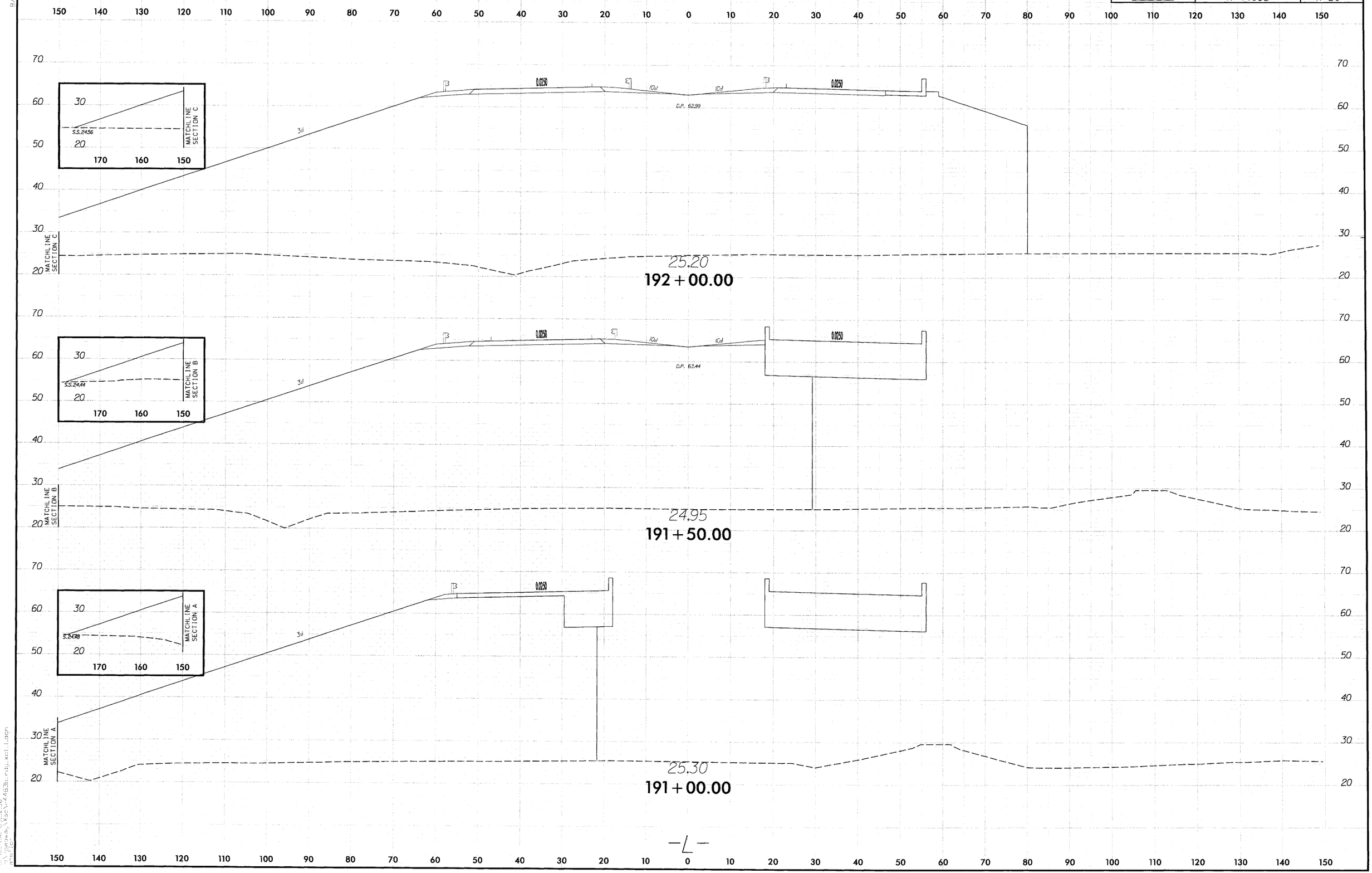

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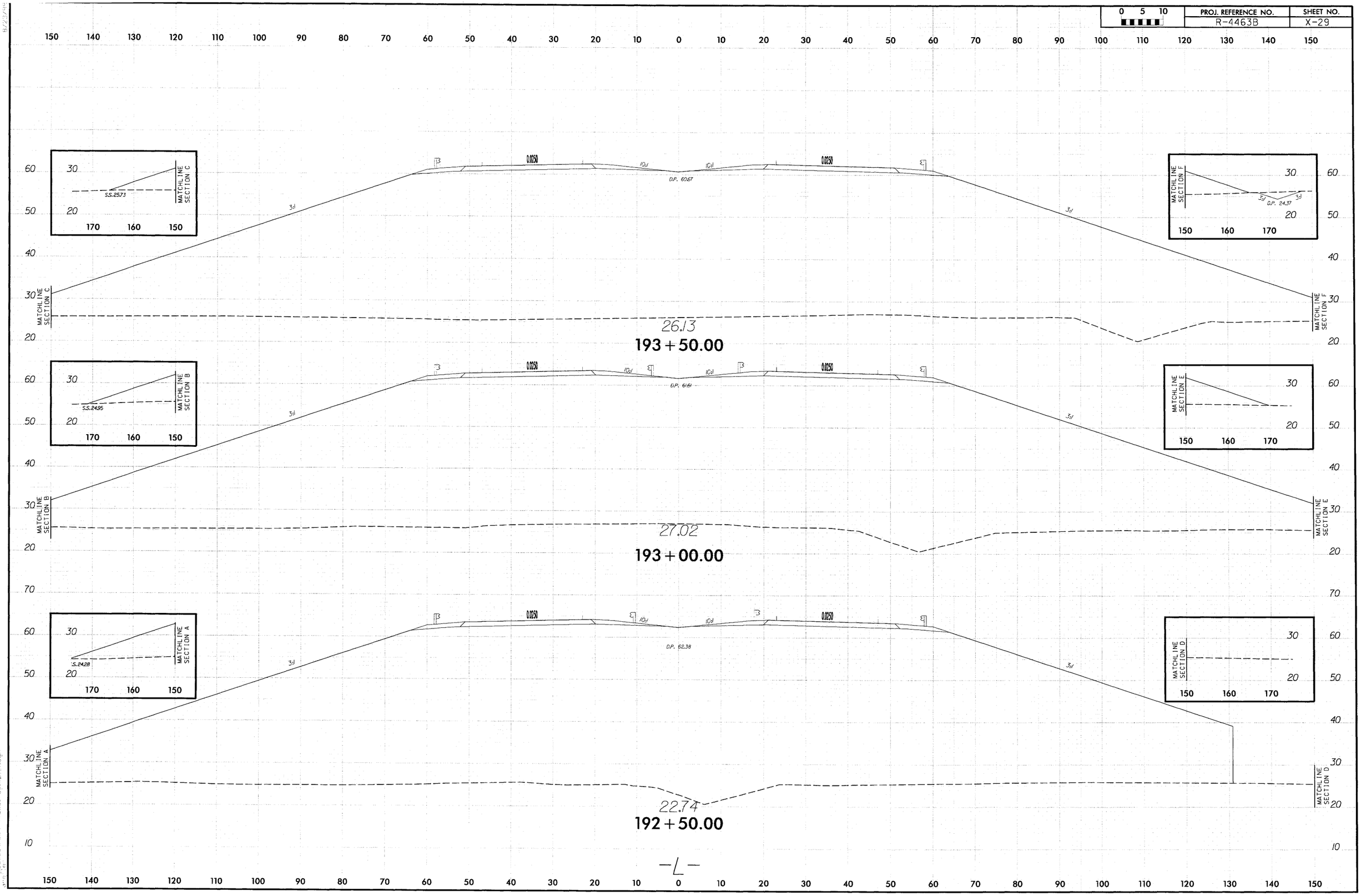

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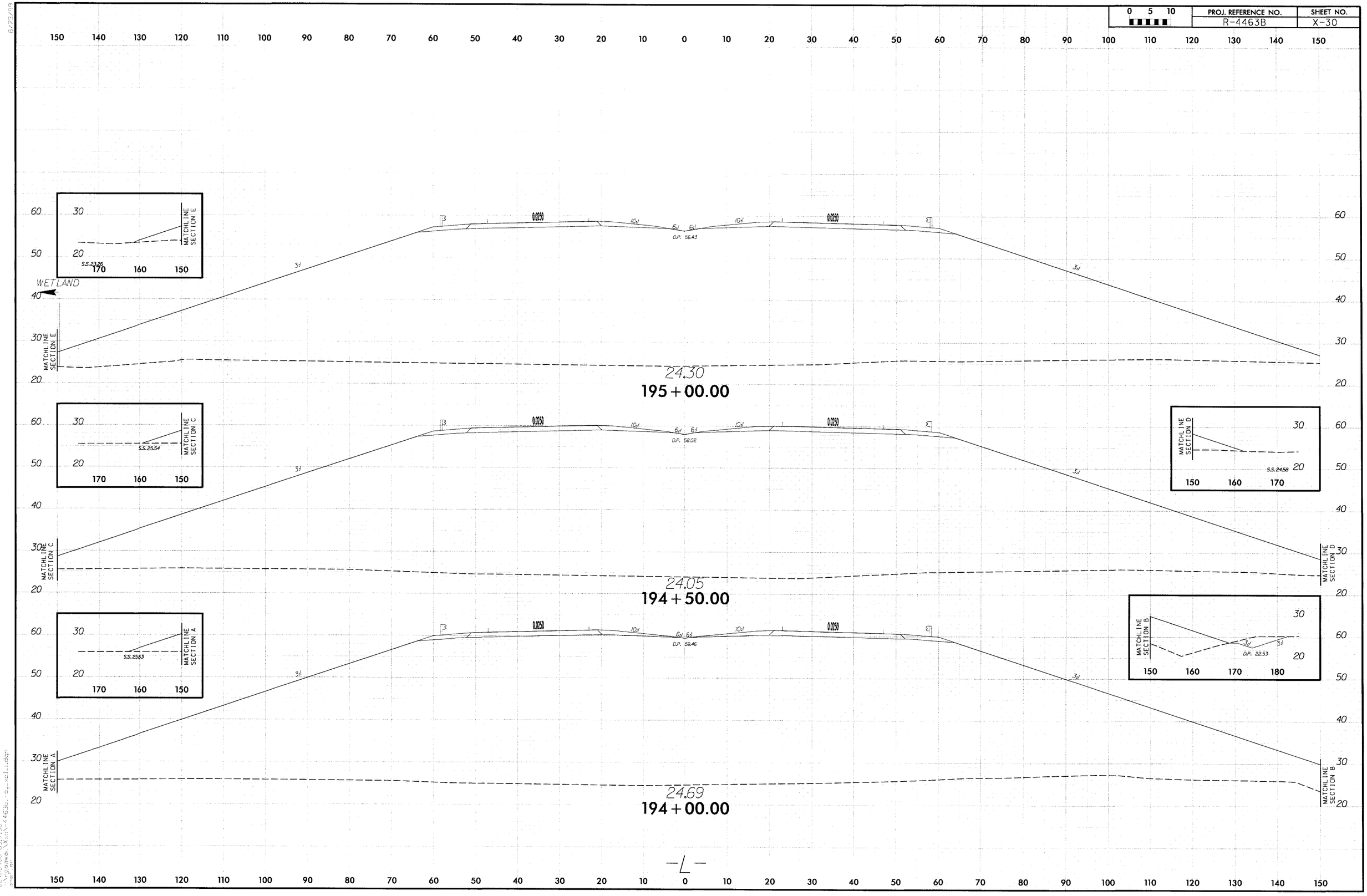

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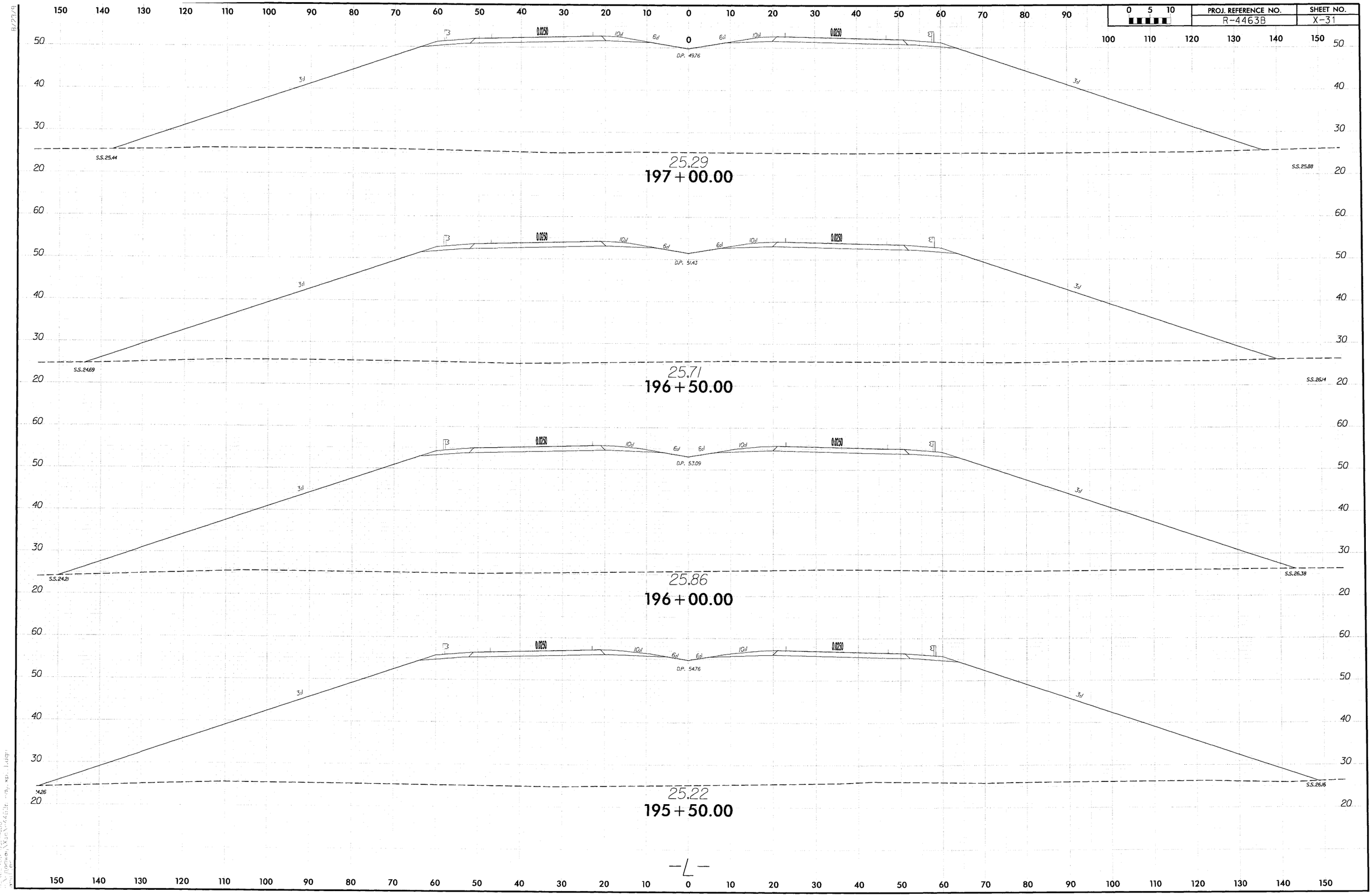

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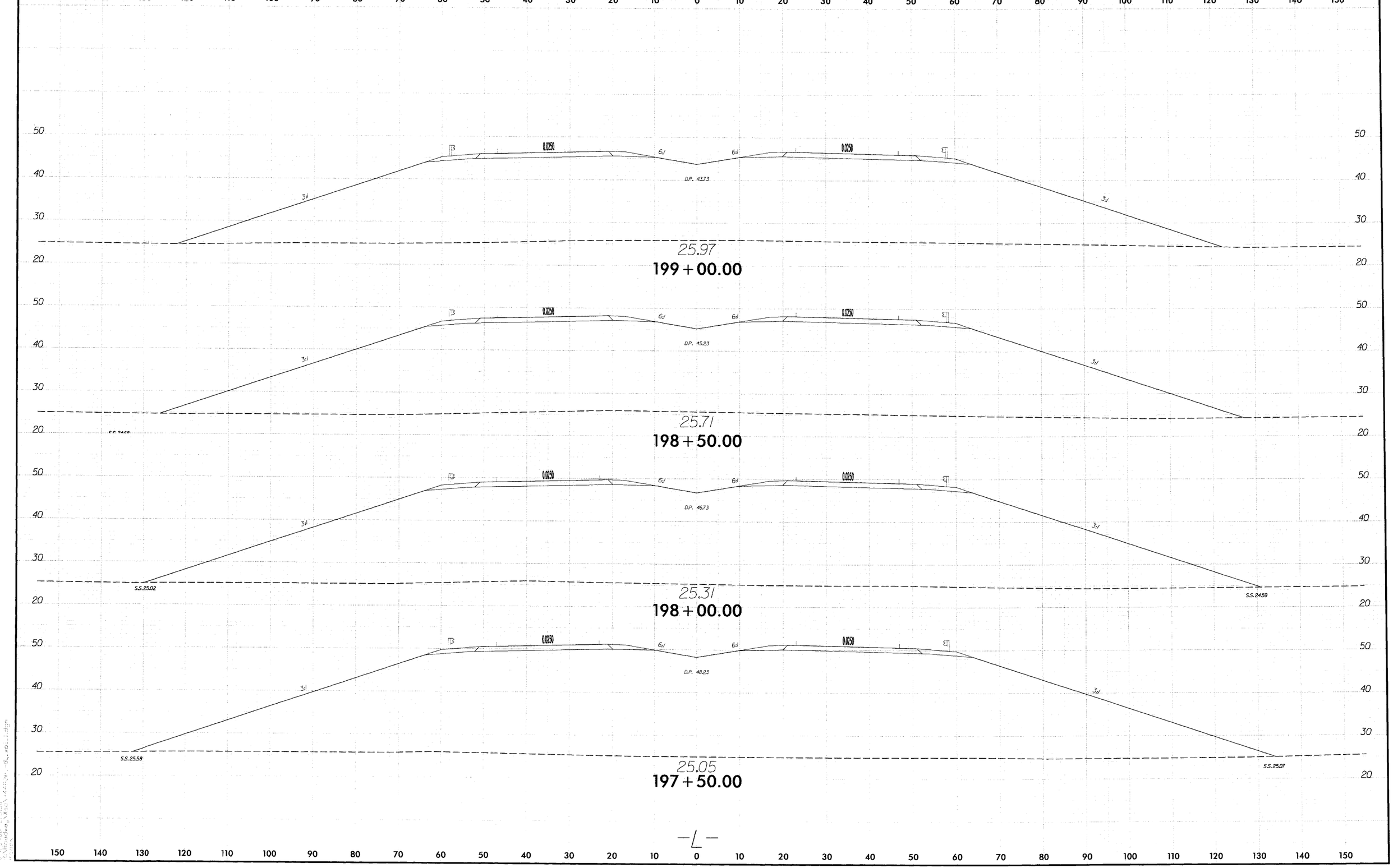

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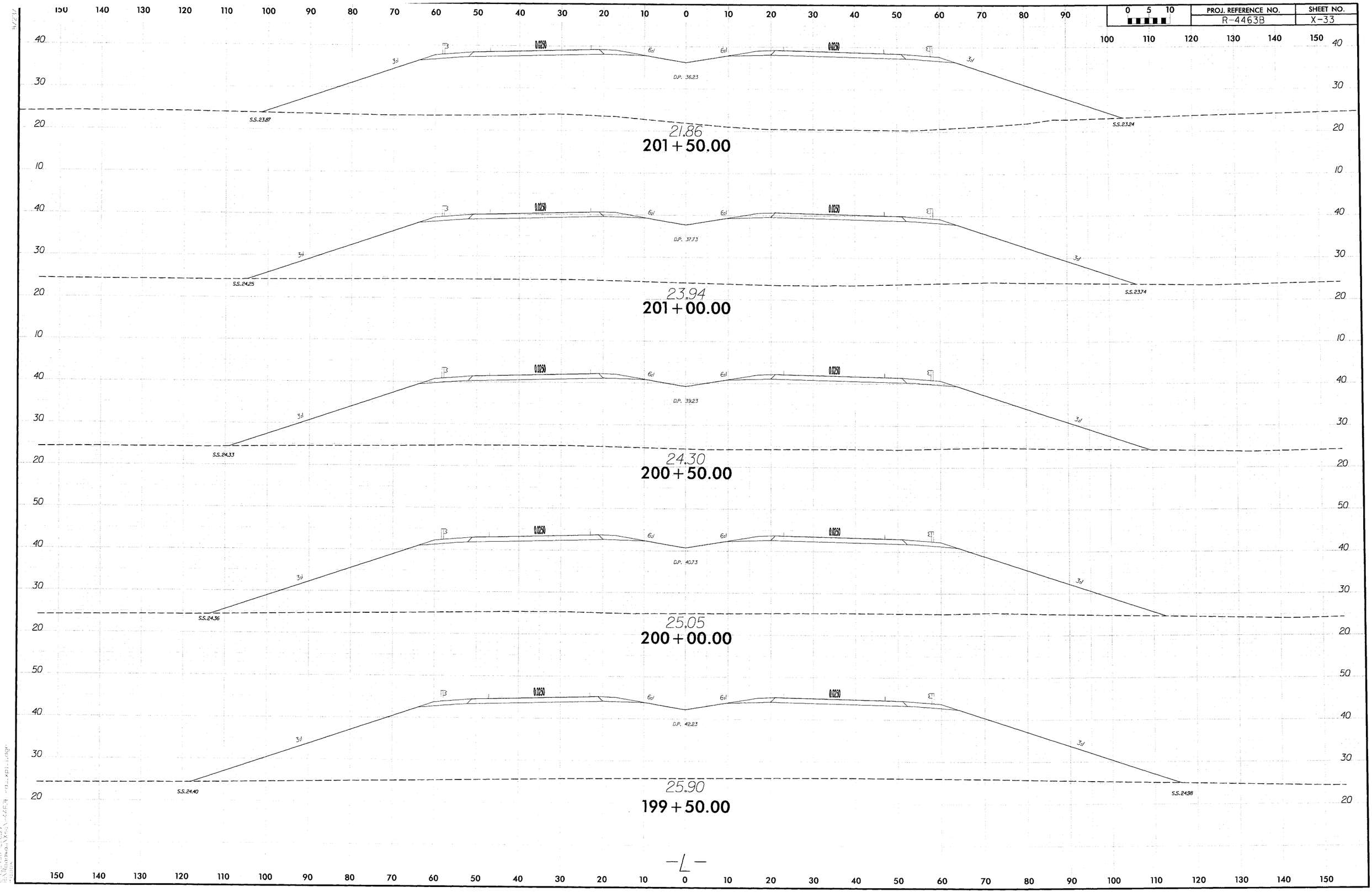

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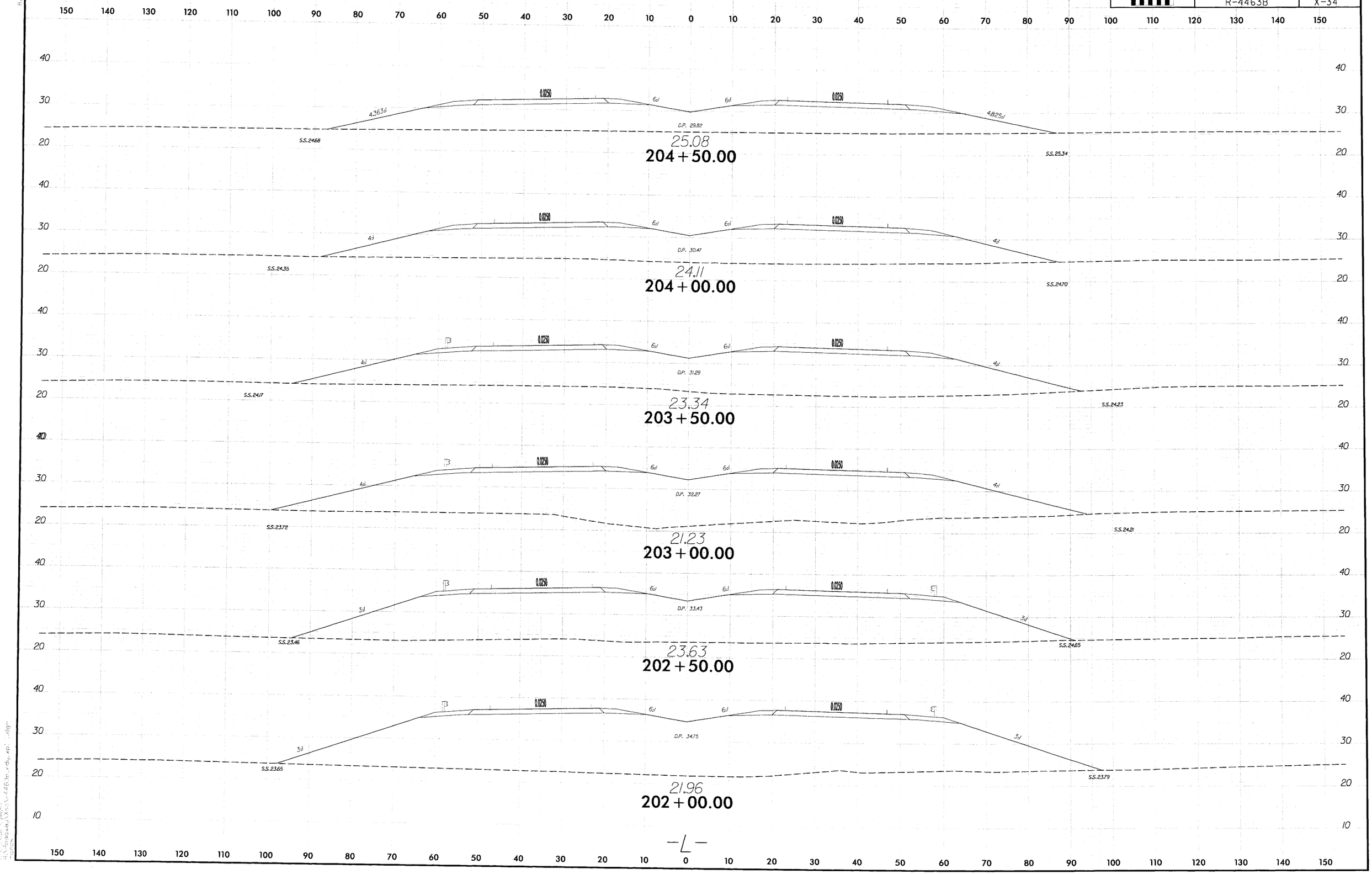

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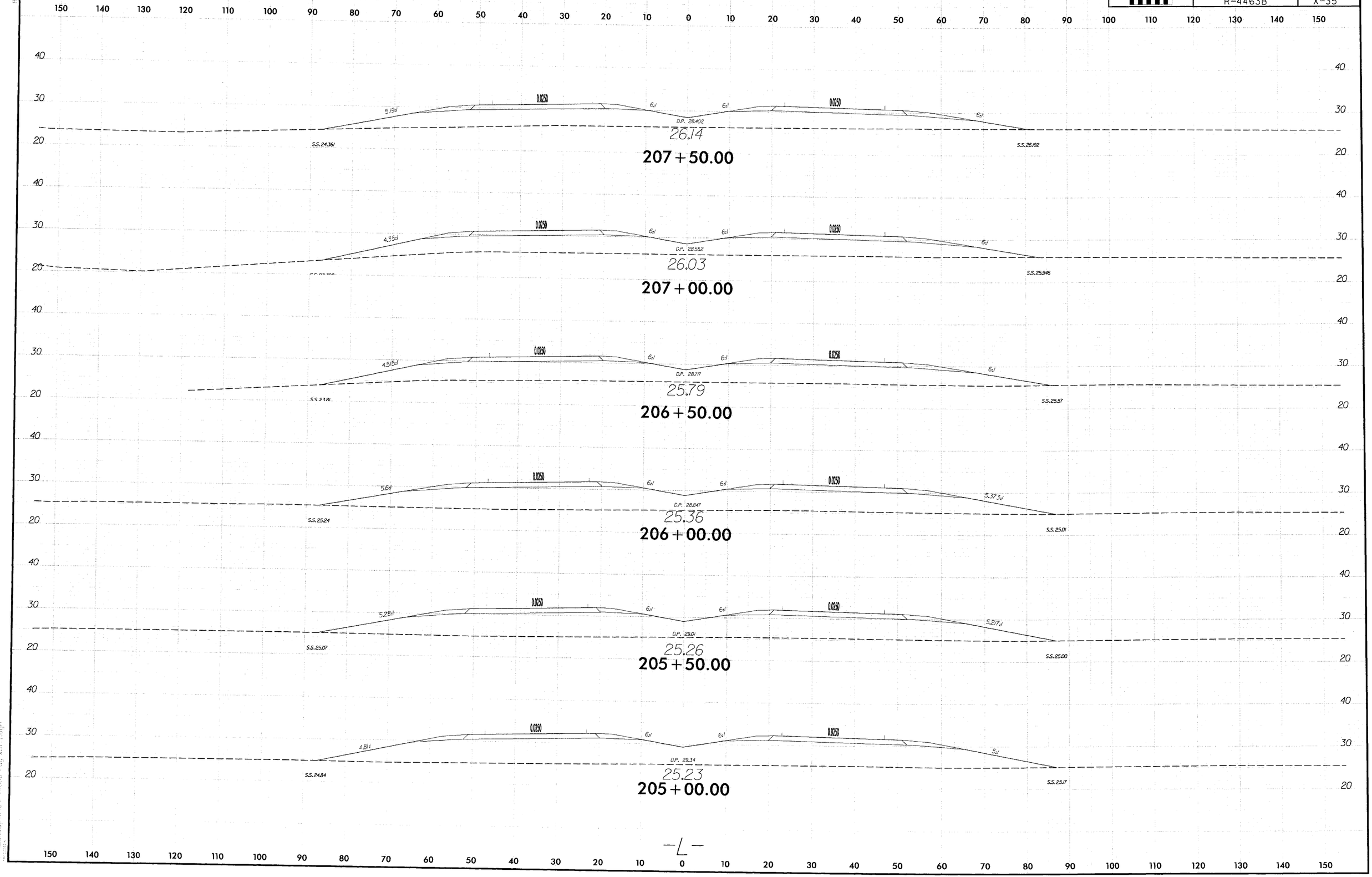

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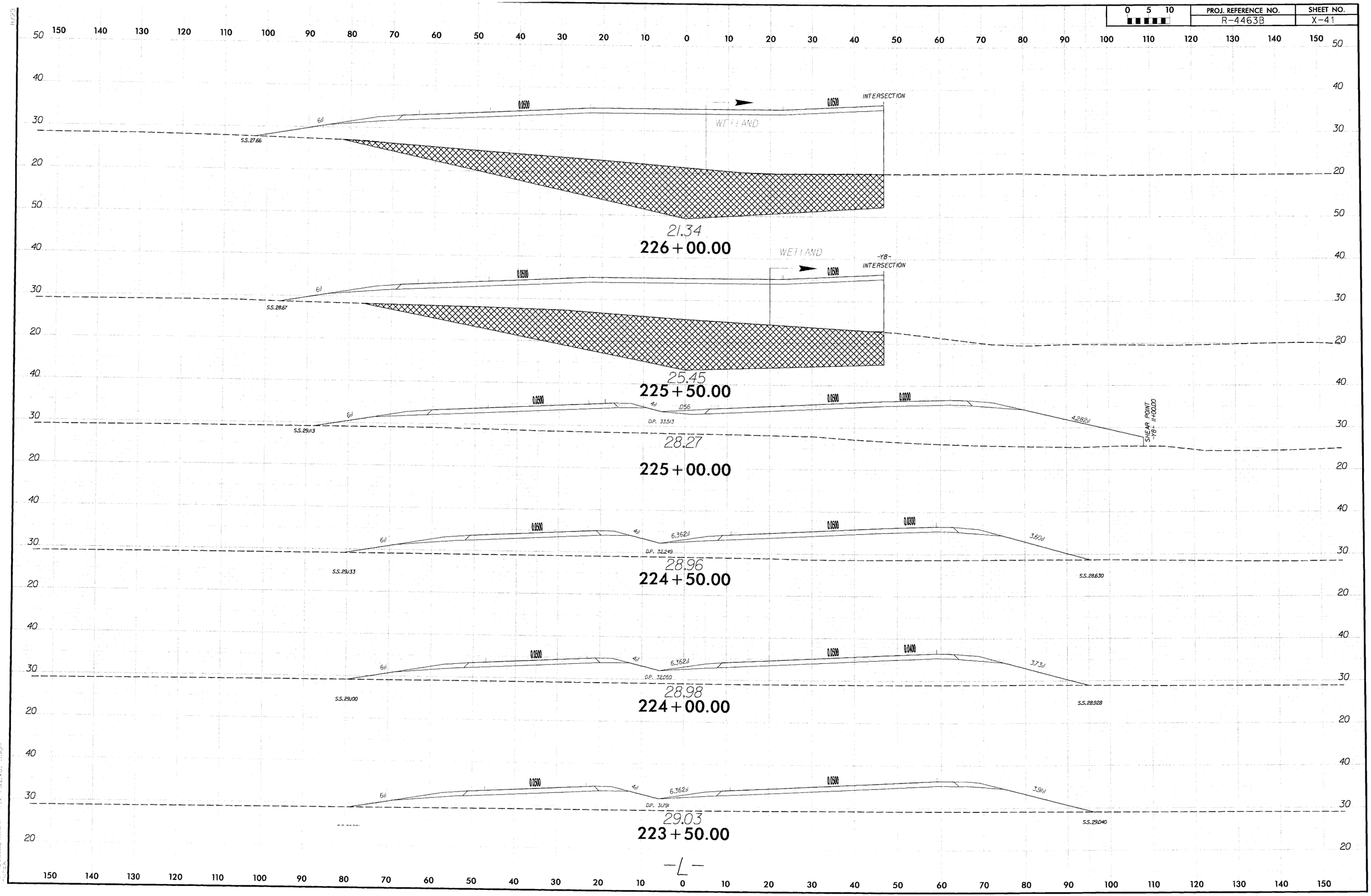

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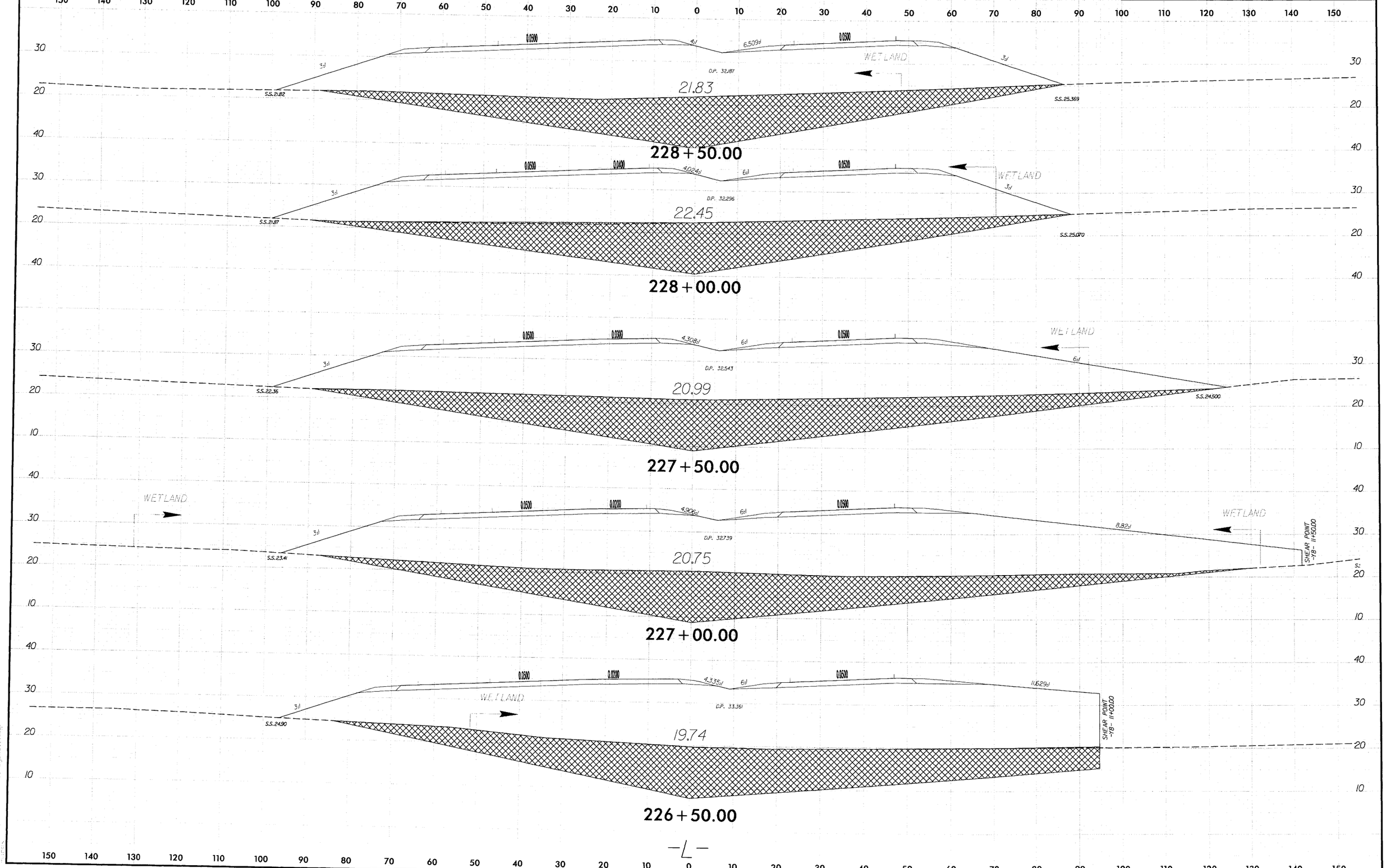

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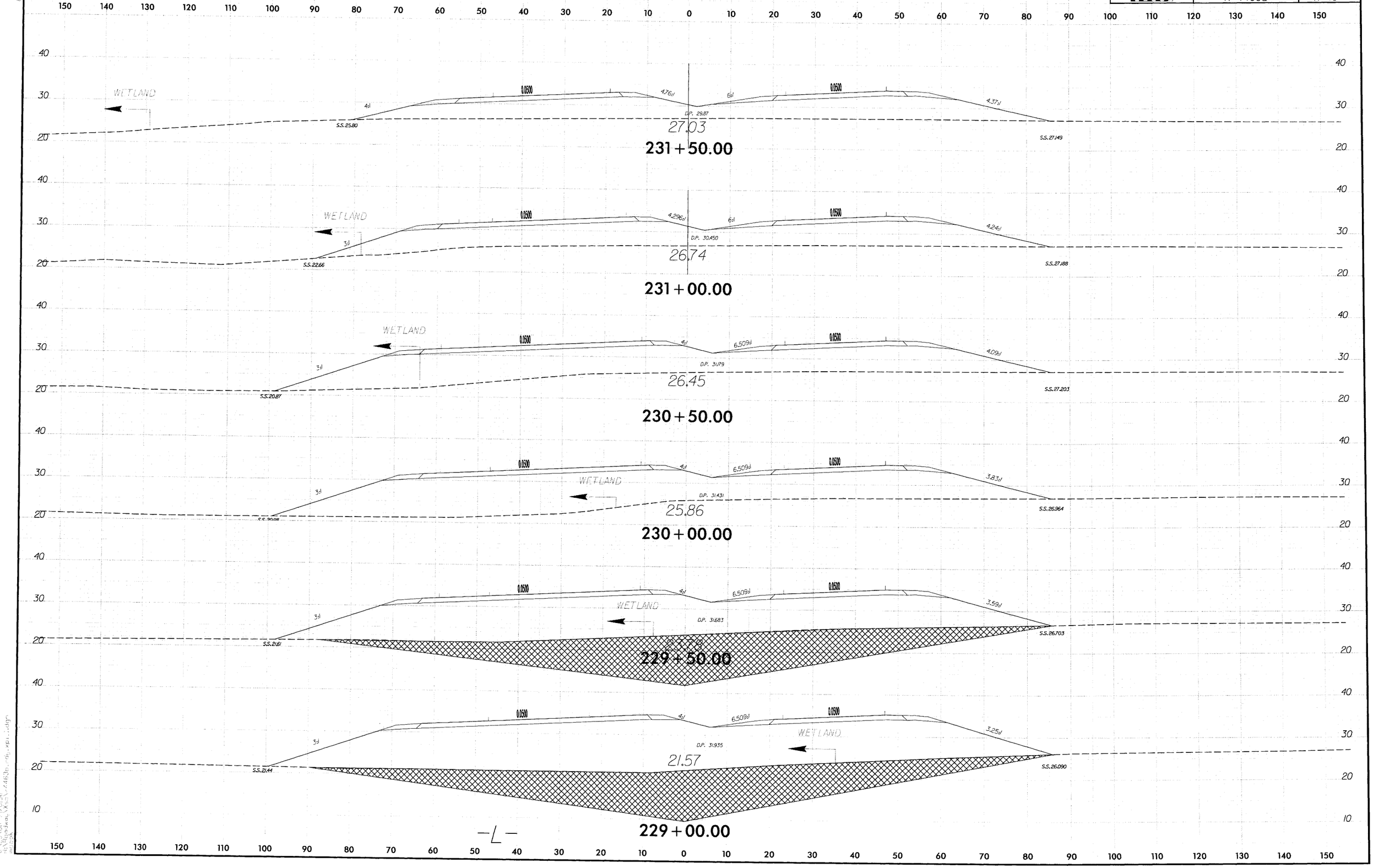
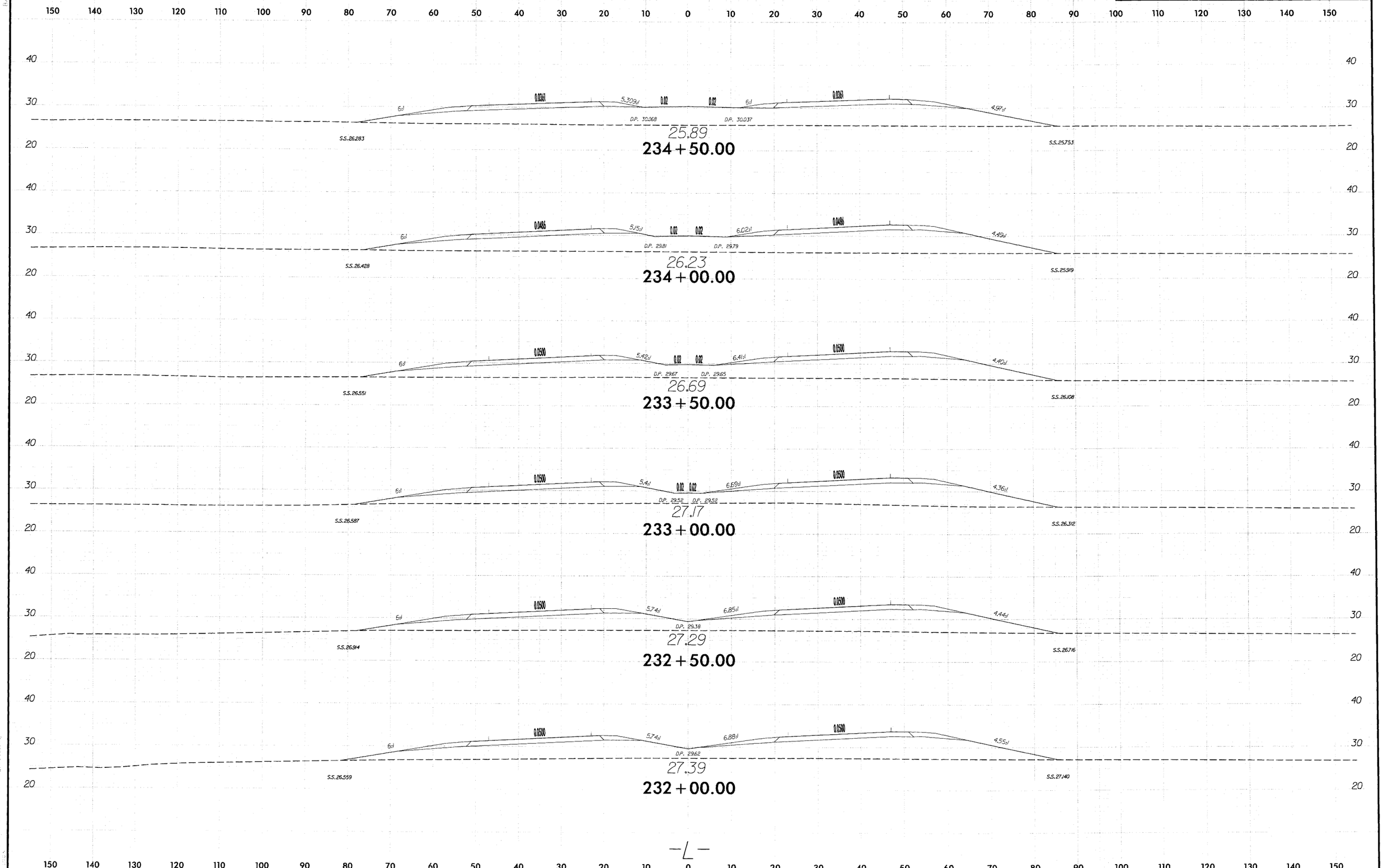
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