STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

DAVID MCCOY
SECRETARY

May 24, 2007

N.C. Division of Coastal Management
400 Commerce Avenue
Morehead City, NC 28557-3421

ATTN: Mr. Stephen Rynas, AICP
Federal Consistency Coordinator

Dear Sir:

Subject: **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.

The purpose of this letter and information package is to request concurrence from the Division of Coastal Management (DCM) for the North Carolina Department of Transportation's (NCDOT) consistency certification for the above-mentioned project.

NCDOT, in consultation with the Federal Highway Administration (FHWA), proposes to construct a new facility, an extension of NC 43 from NC 55 to US 17, located west of New Bern in Craven County. The project is referred to as the NC 43 Connector (Bosch Boulevard) and is approximately 4.5 miles in length. The NCDOT has submitted an application for a U.S. Army Corps of Engineers (USACE) Section 404 Individual Permit as well as a N.C. Division of Water Quality (DWQ) Individual 401 Water Quality Certification.

NCDOT has reviewed the State's coastal program under 15 CFR 930.58 and 15A NCAC 07M. Specifically, we have considered the shoreline erosion, mitigation and coastal water quality policies, the New Bern Land Use Plan, and the Craven County Land Use Plan. The NCDOT certifies that the proposed activity complies with the enforceable policies of North Carolina's approved management program and will be conducted in a manner consistent with such program.

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

Sincerely,

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

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

Coastal Zone Consistency Certification Supporting Information for the NCDOT's Request to Construct an Extension of NC 43 in Craven County (NC 43 Connector)

History

This project was developed through the National Environmental Policy Act (NEPA) / 404 Merger process. All concurrence points have been reached for the B section of this project.

A Purpose and Need Statement documenting the need for the project and potential benefits was completed at Concurrence Point 1 by the Project Team on March 26, 2003. A Preliminary Build Alternatives Analysis was completed by the Project Team on March 15, 2005 which evaluated six preliminary build alternatives. The Project Team reached agreement on the Least Environmentally Damaging Practicable Alternative (LEDPA) on July 13, 2005.

Project Description

The North Carolina Department of Transportation (NCDOT), Division of Highways, in consultation with the Federal Highway Administration (FHWA) proposes to construct a new facility, an extension of NC 43 from NC 55 to US 17, located west of New Bern in Craven County. The project study area is located south of NC 43/55, north of US 17, west of Glenburnie Road and east of the proposed US 17 Bypass. The project is referred to as the NC 43 Connector (Bosch Boulevard) and is approximately 4.5 miles in length.

Typical Section

Section B

From north of US 70 to NC 43/ NC 55 (Neuse Boulevard) [length = 2.4 miles] – Construct a four-lane, 46-foot median divided rural arterial with partial control of access. An interchange is provided at US 70 west of SR 1309 (Glenburnie Road). A grade separation is provided at the North Carolina/ Norfolk Southern railroad crossing. At-grade intersections are provided for the proposed Bosch Boulevard connector (-Y8-) and for existing NC 55 (Neuse Boulevard).

Along existing US 70 east and west of the NC 43 Connector [Length = 0.28 miles] – Widen US 70 for required acceleration and deceleration lanes for the ramps and loop for the proposed interchange.

From the proposed NC 43 Connector east to existing Bosch Boulevard [Length = 0.28 miles] - Construct a two-lane local connector (-Y8-).

From east of Hillmont Drive to north of Kensington Park Drive on existing NC 55 [Length = 0.53 miles] – Widen existing NC 55 (Neuse Boulevard) to provide required

turning lanes for the proposed NC 43 Connector/ NC 55 intersection. Proposed concrete curb and gutter will be used east of the intersection.

Section A

From south of US 70 to US 17 [length = 2.1 miles] – Construct a four-lane, 46 foot median divided rural arterial with partial control of access. An interchange is provided at US 70 west of SR 1309 (Glenburnie Road).

South of US 70, the NC 43 Connector parallels the powerline easement before curving to the east. The southern portion of the road will connect to and require the widening of the existing Trent Creek Road and will terminate at US 17. A full movement intersection is proposed at NC US 17.

Proposed Impacts

Proposed impacts to jurisdictional areas of R-4463 include a total of 4.42 acres of permanent wetland impacts (non-riverine hardwood and swamp forests). There are no proposed temporary wetland impacts. Jurisdictional stream channels and associated riparian buffers will not be impacted by the proposed project. Jurisdictional impacts associated with R-4463 are summarized by as follows:

- Section A: Estimated impacts to jurisdictional areas are associated with functional design and include 2.06 acres of permanent wetland impacts.

- Section B: Proposed impacts to jurisdictional areas include 2.36 acres of permanent wetland impacts. These impacts include fill, excavation and mechanized clearing.

Alternatives

The Least Environmentally Damaging Practicable Alternative (LEDPA) was reached on July 13, 2005. It is one of six alternatives for this project. The NEPA/404 Merger Team Meeting Agreement (Concurrence Point 3), which recommends the alternative selection, can be found in Appendix A of the August 30, 2005 Finding of No Significant Impact (FONSI).

Mitigation

Throughout the NEPA and design process this project has been designed to avoid and minimize impacts to jurisdictional areas. Construction in jurisdictional areas will be in strict compliance with all permits and Best Management Practices (BMPs) to minimize impacts. Several strategies include using 3:1 slopes within wetlands, sediment control fences along fill slopes in wetlands, and no ditching in wetlands.

The necessary compensatory mitigation to offset unavoidable impacts to waters that are jurisdictional under the federal Clean Water Act will be provided by the North Carolina Department of Environment and Natural Resources (DENR) Ecosystem Enhancement

Program (EEP). The NCDOT has avoided and minimized impacts to jurisdictional resources to the greatest extent possible as described above. The remaining, unavoidable impacts to 4.42 acres of jurisdictional wetlands will be offset by compensatory mitigation provided by the EEP. The initial request letter sent to the EEP on January 10, 2006 did not account for mechanized clearing and excavation in wetlands as well as the wetland impacts for Site 4. A copy of the revised EEP acceptance letter dated May 21, 2007 is included in Appendix A of this application.

Threatened and Endangered Species

Plants and animals with federal classification of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. The United States Fish and Wildlife Service (USFWS) lists six (6) federally protected species for Craven County as of the April 2006 listing (Table 1).

Table 1. Federally Protected Species in Craven County

Common Name	Scientific Name	Federal Status	Biological Conclusion
American alligator	*Alligator mississippiensis*	T (S/A)	N/A
Bald eagle	*Haliaeetus leucocephalus*	T	No Effect
Leatherback sea turtle	*Dermochelys coriacea*	E	No Effect
Red-cockaded woodpecker	*Picoides borealis*	E	No Effect
West Indian manatee	*Trichechus manatus*	E	No Effect
Sensitive joint-vetch	*Aeschynomene virginica*	T	No Effect

Wildlife observations were made in conjunction with the investigation of biotic communities performed by Stantec. In addition to the field surveys, the NC Natural Heritage Program (NCNHP) database was reviewed by NCDOT in May 2007 for recorded occurrences of protected species. No occurrences of federally protected species were recorded for the project study area. Biological conclusions of "No Effect" were reached for all six federally protected species listed for Craven County. The biological surveys indicated that no habitat for the red-cockaded woodpecker, bald eagle, leatherback sea turtle, West-Indian manatee and sensitive joint vetch is present within the project boundaries.

Cultural Resources

The potential of the NC 43 Connector to impact cultural resources was evaluated in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. Potential effects were determined using Criteria for Effect and Adverse Effect (36 CFR 800.9) developed by the Advisory Council on Historic Preservation. Concurrence on the eligibility of each property with respect to inclusion on the national

Register of Historic Places and the final determination of effects were made by the State Historic Preservation Office (SHPO).

There are no known structures of historical or architectural importance within the project corridor. As stated in the Environmental Assessment (EA), the project study area contains one property (Elijah Farrow Farm) that is eligible for the National Register of Historic Places; however, the property is outside the project corridor. The SHPO concluded that the NC 43 Connector would have No Effect on the Elijah Farrow Farm property. The SHPO concurrence forms are included in Appendix A of the FONSI.

Other Permits

In addition to the DCM Consistency Determination, permits to be obtained for this project include: an Individual 404 permit and an Individual 401 Water Quality Certification. Other permits required for this project include a Division of Water Resources (DWR) Central Coastal Plain Capacity Use Area (CCPCUA) permit and a State Stormwater permit.

Division of Coastal Management (DCM) General Policy Guidelines for the Coastal Area

The general policy guidelines in 15A NCAC 07M have been reviewed for applicability to this project. Explicitly, the .0200 rules (shoreline erosion), .0300 rules (shorefront access), .0700 rules (mitigation), and the .0800 rules (water quality) were reviewed. This project will not affect shoreline erosion or shoreline access. However, this project will require compensatory mitigation and impact water quality. This project has been designed to avoid and minimize jurisdictional areas to the largest extent possible. Best Management Practices will be in place during construction; compensatory mitigation will be provided through EEP.

New Bern Land Use Plan

The 2000 Town of New Bern Coastal Area Management Act (CAMA) Land Use Plan was reviewed for policies and statements that would pertain to this project. The Town of New Bern is currently in the process of updating their land use plan. The existing land use of the project area is undeveloped.

According to the January 2005 Qualitative Indirect and Cumulative Impacts (ICI) Assessment, the project area falls within six land use distribution categories: residential, institutional, industrial, commercial, undeveloped / silviculture, open / maintained at approximately 16 percent, 2.5 percent, 7 percent, 2 percent, 59.5 percent and 13 percent, respectively. Commercial land is predominant along major roadway corridors, particularly the area bound by US 70, US 17 and Glenburnie Road.

After reviewing the various policy statements, NCDOT concludes that this project is consistent with the Town of New Bern CAMA Land Use Plan.

Craven County Land Use Plan

The 2006 Craven County Land Use Plan was reviewed for policies and statements that would pertain to this project. The purpose of and need for this project, as identified in the EA, is based on the economic development of Craven County and on projected traffic volumes.

The Economic Development mission statement listed on page 15 of the 2006 Craven County Land Use Plan states, "To create prosperity and stability in Craven County's economy through emphasis on retention and growth in desirable sectors of business and industry". Recommendation three on page 18 in the Economic Development section states, "support the expansion and enhancement of existing businesses, and create an environment that entices new businesses to locate to Craven County" (Craven County, 2000). A new connection between US 17, US 70 and NC 43 would help promote economic development in Craven County by providing a transportation infrastructure capable of accommodating future development that would result in job creation. The proposed connector would provide a more direct route for truck traffic to access US 70 from the north, which would reduce truck traffic on Glenburnie Road between NC 43/55 and US 70. This falls in line with the Economic Development mission detailed in the Craven County Strategic Plan for 2006, which includes the creation of a stable economy through the attainment, retention and expansion of desirable businesses and industries.

After reviewing the various policy statements, NCDOT concludes that this project is consistent with the Craven County Land Use Plan.

APPENDIX A

Ecosystem Enhancement Program
Request & Acceptance Letters

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

January 10, 2006

Mr. William D. Gilmore, P.E.
EEP Transition Manager
Ecosystem Enhancement Program
1652 Mail Service Center
Raleigh, NC 27699-1652

Dear Sir:

Subject: Craven County. NC 43 Connector (Bosch Blvd.). Extension of NC 43 from NC 55 to US 17 just west of New Bern. State Project No 6.804857, WBS: 35601.1.1, TIP Nos. R-4463.

The purpose of this letter is to request that the North Carolina Ecosystem Enhancement Program (EEP) provide confirmation that you are willing to provide compensatory mitigation for the project in accordance with the Memorandum of Agreement (MOA) signed July 22, 2003 by the USACE, the NCDENR and the NCDOT.

The North Carolina Department of Transportation proposes to construct an extension of NC 43 from NC 55 to US 17 just west of New Bern in Craven County, known as the NC 43 Connector or Bosch Boulevard.

RESOURCES UNDER THE JURISDICTION OF SECTION 404 AND 401 OF THE CLEAN WATER ACT.

We have avoided and minimized the impacts to jurisdictional resources to the greatest extent possible. The remaining impacts to jurisdictional resources will be compensated for by mitigation provided by the EEP program. We estimate that 3.95 acres of wetlands will be impacted.

The project is located in the Coastal Plain Physiographic Province in Craven County in the Neuse River basin in Hydrological Cataloguing Unit 03020204.

The wetland impacts total 3.95 acres of nonriverine hardwood and swamp forests. We propose to provide compensatory mitigation for the wetland impacts by using the EEP for the 3.95 acres of impacts.

Please send the letter of confirmation to William Wescott at U. S. Army Corps of Engineers Washington Regulatory Field Office, P.O. Box 1000 Washington, NC 27889-1000. Mr. Wescott's FAX number is (252) 975-1399. The current let date for the project is 05/16/06 for which the let review date is 03/28/06.

In order to satisfy regulatory assurances that mitigation will be performed; the NCDWQ requires a formal letter from EEP indicating their willingness and ability to provide the mitigation work requested by NCDOT. The NCDOT also requests a copy of the confirmation letter be sent to Mr. John Hennessy of NCDWQ.

Please respond to NCDOT in writing within 10 business days with an EEP acceptance letter for this NCDOT project. If you have any questions or need additional information please call Chris Manley @ (919) 715-1487 or cdmanley@dot.state.nc.us .

Sincerely,

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

Mr. John Hennessy, NCDWQ
Ms. Nicole Thompson, NCDWQ
Mr. William Wescott, USACE
Ms. Cathy Brittingham, NCDCM
Mr. Bill Arrington, NCDCM
Ms. Linda Fitzpatrick, NCDOT Natural Environment Unit
Mr. Majed Alghandour, P. E., NCDOT Project Management/Scheduling Unit
Mr. Todd Jones, NCDOT External Audit Branch
File-R-4463

January 31, 2006

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 compensatory non-riverine wetland mitigation for the subject project. Based on the information supplied by you in a letter dated January 10, 2006, the impacts are located in CU 03020204 of the Neuse River Basin in the Northern Outer Coastal Plain (NICP) Eco-Region, and are as follows:

Non-Riverine Wetlands: 3.95 acres

The subject project is <u>not</u> listed in Exhibit 2 of the Memorandum of Agreement among the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, Wilmington District dated July 22, 2003. Mitigation for this project will be provided in accordance with the above referenced agreement. EEP will commit to implementing sufficient compensatory non-riverine 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 Tri-Party MOA.

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

Sincerely,

James B. Stanfill Sr

William D. Gilmore, P.E.
EEP Director

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

Ecosystem Enhancement PROGRAM

January 31, 2006

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-riverine wetland mitigation for the unavoidable impact associated with the above referenced project. As indicated in the NCDOT's mitigation request letter dated January 10, 2006, the project will impact 3.95 acres of non-riverine wetlands.

EEP will commit to implementing sufficient compensatory non-riverine wetland mitigation up to a 2:1 ratio to offset the impacts associated with this project by the end of the MOA year in which the permit for this project is issued, in accordance with Section X of the Memorandum of Agreement between the U. S. Army Corps of Engineers, N. C. Department of Environment and Natural Resources, and N. C. Department of Transportation (Tri-Party MOA), signed on July 22, 2003. Compensatory riverine wetland mitigation assets available include, but are not limited to, the Croatan Mitigation Bank and Stallings Mitigation site.

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

Sincerely,

William D. Gilmore, P.E.
EEP Director

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

Ecosystem Enhancement PROGRAM

May 21, 2007

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 May 15, 2007, the project will impact 4.42 acres of non-riparian wetlands.

This mitigation acceptance letter replaces the mitigation acceptance letter issued on January 31, 2006. 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 8.84 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. Stanfield Jr.

William D. Gilmore, P.E.
EEP Director

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

Ecosystem Enhancement PROGRAM

May 21, 2007

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 May 15, 2007, 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: 4.42 acres

This mitigation acceptance letter replaces the mitigation acceptance letter dated January 31, 2006. 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 Jr

William D. Gilmore, P.E.
EEP Director

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

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)	OMB APPROVAL NO. 0710-003

Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided on this form will be used in evaluating the application for a permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME & TITLE (an agent is not required)
NC DOT	
6. APPLICANT'S ADDRESS PEDA-NEU 1548 MAIL SERVICE CENTER RALEIGH, NC 27699-1548	9. AGENT'S ADDRESS
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business 919-715-1335	10. AGENT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business

11. STATEMENT OF AUTHORIZATION

I hereby authorize _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____

APPLICANT'S SIGNATURE DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)
R-4463 (NC 43 CONNECTOR)

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
N/A	N/A
15. LOCATION OF PROJECT CRAVEN (COUNTY) NC (STATE)	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)
SOUTH OF NC 43/55, NORTH OF US 17, WEST OF NEW BERN, EAST OF PROPOSED US 17 BYPASS (R-2301)

17. DIRECTIONS TO THE SITE
NORTH PORTION OF SITE: (FROM NEW BERN) N 43/55 → LEFT ON BOSCH BLVD → AT NORFOLK S RR TURN RIGHT (N) TO THE PROPOSED ROADWAY
SOUTH PORTION OF SITE: W 17 FROM NEW BERN → TURN RIGHT ONTO TRENT RD.

18. NATURE OF ACTIVITY (Description of project, include all features)

CONSTRUCT A 4-LANE DIVIDED EXPRESSWAY WITH A 46 FOOT MEDIAN AND PARTIAL CONTROL OF ACCESS ON NEW LOCATION.

19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)

IN ACCORDANCE WITH THE CRAVEN COUNTY DEVELOPMENT, THIS ROADWAY WILL IMPROVE TRAFFIC FLOW NORTH OF NEW BERN AND AID IN FURTHER ECONOMIC DVLPMT.

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. REASON(S) FOR DISCHARGE

CONSTRUCTION OF ROADWAY

21. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS

TYPICAL ROADWAY FILL FROM A LOCAL SOURCE

22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (see instructions)

4.42 ACRES WETLANDS

23. IS ANY PORTION OF THE WORK ALREADY COMPLETE? YES ○ NO ◉ IF YES, DESCRIBE THE WORK

24. ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC. WHOSE PROPERTY ADJOINS THE WATERBODY (If more than can be entered here, please attach a supplemental list)

SEE SUPPLEMENTAL LIST

25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE, OR LOCAL AGENCIES FOR WORK DESCRIBED IN THIS APPLICATION

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
N/A					

* Would include but is not restricted to zoning, building and flood plain permits.

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and will fully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, facticious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

DAVID MCCOY
SECRETARY

May 24, 2007

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 Individual Section 404 and 401 permits for construction of NC 43 Connector.** 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. USACE Action ID 200310789. Debit $475 from WBS 35601.1.1.

The North Carolina Department of Transportation (NCDOT), Division of Highways, in consultation with the Federal Highway Administration (FHWA), proposes to construct on new location an 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 and has been divided into two sections, Section A and Section B.

The purpose of this letter is to request approval for a Section 404 Individual Permit and a Section 401 Water Quality Certification Permit. In addition to the cover letter and ENG Form 4345, this application package includes the following as appendices: 8.5 x 11 permit drawings (Appendix A), Merger 01 Revised 4A, 4B, and 4C meeting minutes (Appendix B), the Stormwater Management Plan (Appendix C), North Carolina Ecosystem Enhancement Program (EEP) revised acceptance letter dated May 21, 2007 (Appendix D), and a set of half size roadway plans (Appendix E).

1.0 Purpose and Need

The purpose and need for this project, as identified in the Environmental Assessment (EA), is based on the economic development of Craven County and on projected traffic volumes. A new connection between US 17, US 70 and NC 43, and the proposed US 17 Bypass (R-2301) would help promote economic development in Craven County by providing a transportation infrastructure capable of accommodating future development that would result in job creation. The proposed connector would provide a more direct route for truck traffic to access US 70 from the north, which would reduce truck traffic on Glenburnie Road between NC 43/55 and US 70. This falls in line with

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

one of the three main goals detailed in the Craven County Strategic Plan for 2006, which includes the creation of a stable economy through the attainment and retention of desirable businesses and industries .

2.0 Project Description

At the northern terminus of the project, R-4463B (NC 43 Connector) will join with NC 43 and NC 55 at a proposed signal. A connector will be constructed northeast of Amital Spinning Corporation to connect the NC 43 Connector to Bosch Boulevard. At the southern terminus of the B section, improvements will be made to US 70 to connect with R-4463. At the southern terminus of the A section, improvements are proposed to widen Trent Creek Road and to join US 17 to US 70 (Section R-4463A).

3.0 Summary of Impacts

Waters of the U.S.: Proposed impacts to jurisdictional areas of R-4463 total 4.42 acres (R-4463A-2.06 acres, R-4463B-2.36 acres) of permanent wetland impacts (non-riverine hardwood and swamp forests). No temporary wetland impacts are proposed. No jurisdictional streams and no ponds will be impacted by the project.

Neuse Riparian Buffers: There are no jurisdictional streams and/or associated riparian buffers within the project limits. Therefore, no jurisdictional streams or riparian buffers will be affected by the proposed project.

4.0 Summary of Mitigation

This project has been designed to avoid and minimize impacts to jurisdictional areas in accordance with the National Environmental Policy Act (NEPA) and throughout the design process. NCDOT proposes to use the North Carolina Ecosystem Enhancement Program to provided compensatory mitigation for impacts to 4.42 acres of jurisdictional wetlands.

5.0 Project Schedule

Construction of this project is divided into two sections (A and B). Permit drawings for each of the two sections are included in Appendix A. The attached permit drawings are complete in detailing all proposed impacts occurring within section R-4463B, which is at 100 percent design completion. However, permit drawings for section R-4463A detail the current best preliminary alignment and maximum potential impacts, based on functional design. The impacts associated with section R-4463A are expected to decrease once the final design is completed. Final permit drawings for R-4463A will be provided under separate cover in the form of a permit modification request. NCDOT understands that no construction will occur on Section A until the final design and resulting impacts have been approved by the regulatory agencies.

Table 1. Project Sections and Scheduling

Section	Project Limits	Scheduled Let Date
R-4463A	South of US 70 to North of US 17	Post Year: 2012
R-4463B	South of NC 43 / NC 54 to North of US 70	September 2007

6.0 NEPA Document Status

The US Department of Transportation, Federal Highway Administration (FHWA) and NCDOT submitted the Environmental Assessment (EA) on March 21, 2005 in compliance with the NEPA guidelines. The EA explains the purpose and need for the project, provides a description of the alternatives considered, and characterizes the social, economic, and environmental effects. The EA was approved and circulated to federal, state, and local agencies. A Finding of No Significant Impact (FONSI) was approved on August 30, 2005. On December 27, 2006 the Right of Way Consultation was signed. Copies of the project documents have been provided to regulatory review agencies involved in the approval process. Additional copies will be provided upon request.

This project was developed through the NEPA / 404 Merger process. All concurrence points have been reached for the B section of this project. Concurrence Point 4A was reached for the A section (as well as the B section) on October 13, 2005. The letting date for the A section is post year in the latest TIP; construction is not funded until after 2012.

6.1 Independent Utility

R-4463 is in compliance with 23 CFR Part 771.111(f) which lists the FHWA characteristics of the independent utility of a project. Construction of Section B meets the criteria for independent utility as discussed below:

- The project has logical termini and independent utility and is of sufficient length to address environmental matters on a broad scope;
- The project is usable and a reasonable expenditure of funds, even if no additional transportation improvements are made in the area; and
- The project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

7.0 Resource Status

7.1 Wetland Delineations

Wetland delineations for R-4463 were conducted in 2003 by Stantec Consulting Services using the criteria specified in the 1987 Corps of Engineers Wetland Delineation Manual. Wetlands were delineated between March and May 2003. Mr. Michael F. Bell of the USACE Wilmington Regulatory Field Office verified the delineations in the field on June 15, 2004 and December 29, 2004.

A fourth wetland impact site was identified in Section B due to a dammed pond located north of NC 55. Additional wetland delineations were performed in 2007 in conjunction with the design-build process. Site 4 was reviewed by Mr. Brian Wrenn and Mr. David Wainwright of DWQ during a field

meeting on February 26, 2007. Site 4 was also reviewed in the field by Mr. William Wescott of USACE on April 10, 2007 and subsequently verified by Mr. Wescott at the 4C meeting on April 11, 2007.

7.2 Stream Delineations

Stream delineations for R-4463 were conducted in April 2003 by Stantec Consulting Services using the criteria specified by USACE and DWQ. The project corridor is located within the DWQ sub-basin of the Neuse River Basin. There are no jurisdictional streams and/or associated riparian buffers within the project limits.

NCDOT conducted a field review on April 20, 2006, with Mr. Brian Wrenn of DWQ to confirm that no jurisdictional streams are located within the project limits. Based on the field review, only the UT to Wilson Creek, east of Trent Creek Road, was determined to be jurisdictional (Section A). This stream is located outside the project limits and is not located within 1 mile nor does it flow into a stream with 303(d) classification. In addition, no designated Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supply I (WS-I), or Water Supply II (WS-II) waters occur within 1.0 miles of the project study area.

7.3 R-4463A and R-4463B: Characterization of Jurisdictional Sites

7.3.1 Wetlands

Proposed impacts to jurisdictional wetlands within Section B total 2.36 acres of permanent impacts. Proposed impacts to jurisdictional areas within Section A have been calculated (2.06 acres); however, are preliminary at this time. These values are the result of minimization and avoidance measures and represent the maximum possible impacts foreseen at this time.

Table 2 describes the rating, classification and common name for the six wetlands impacted by the project. The primary wetland community type associated with Section B can be characterized as Nonriverine Hardwood Forest and is an obvious depression that was recently logged. There are indications of previous wetland characteristics like the buttressing of trees and the presence of hydrophytic vegetation. However, it is now primarily composed of more successional types of vegetation including sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), broomsedge (*Andropogon virginicus)* and dog fennel *(Eupatorium capillifolium).* Some wetter species like water tupelo *(Nyssa aquatica),* laurel-leaf greenbrier *(Smilax laurifolia),* giant cane *(Arundinaria gigantean),* inkberry *(Ilex glabra)* and horse-sugar *(Symplocos tinctoria)* were found throughout the depression as well. The soils are classified as Bayboro mucky loam. This area had likely resembled a non-riverine hardwood forest prior to disturbance and drainage. These wetlands are defined by Cowardin et al. (1979) as a palustrine forested area with broad-leaved deciduous vegetation characterized by temporary flooding (PFO1A).

Hydrology for the depressional wetlands (non-riverine) is provided by rainfall, surface water run-off and groundwater discharge. Within the delineation corridor, this community has been highly disturbed through drainage alterations. Much of the wetland hydrology is now absent due to extensive ditching for silviculture. In addition, the wetland hydrology has been further altered by groundwater drawdown associated with the local Clarks and Martin Marietta quarries.

Wetlands occurring within Section A are characterized in a similar manner as those in Section B. These systems exhibit the same position within the landscape, hydrologic sources and vegetative species.

Table 2. Wetland characterization at each impacted site

Site	Section	DWQ Wetland Rating	Cowardin Classification	Common Name
1	B	36	PFO1C	Nonriverine Swamp Forest
2	B	36	PFO1A	Nonriverine Hardwood Forest
3	B	40	PFO1A	Nonriverine Hardwood Forest
4	B	--	PFO6G	Nonriverine Headwater Swamp
1	A	40	PFO1/4A, PF04A	Nonriverine Hardwood Forest
2	A	36	PFO1/4A, PFO4A	Nonriverine Hardwood Forest

7.3.2 Impacts to Jurisdictional Resources

At the present time, R-4463A permit drawings detailing the jurisdictional impacts are preliminary and based on functional design. The following estimated impacts to jurisdictional areas within Section A are the result of minimization and avoidance measures and represent the maximum possible impacts foreseen at this time. NCDOT will continue to explore avenues to reduce these projected impacts. Proposed changes will be coordinated with the relevant review agencies.

Impacts to jurisdictional wetlands are summarized in Table 3 as well as sheets 2, 3, 7, 8, 10-11, and 16 of the permit drawings (Appendix A). Total permanent wetland impacts for the entire project (sections A and B) are projected to be 4.42 acres.

Table 3. Permanent Jurisdictional Impacts

Site	R-4463 Section	Station	Permanent Fill in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Excavation in Wetlands (ac)	Total (ac)
1	B	-L- 181+20 to 182+76	0.28	0.02	0.00	0.30
2	B	-L- 194+70 to 195+12	0.00	0.01	0.00	0.01
3	B	-L- 225+02 to 231+13	1.89	0.09	0.00	1.98
4	B	-Y5- 17+60 LT	0.00	0.02	0.05	0.07
1	A*	-L- 17+75 to 24+25	1.47	0.15	0.00	1.62
2	A*	-L- 24+20 to 26+43	0.40	0.04	0.00	0.44
Total Permanent Wetland Impacts:			**4.04**	**0.33**	**0.05**	**4.42**

*All estimated locations and impacts associated with R-4463A are based on functional design

Permanent Impacts: Proposed impacts include fill, excavation, and mechanized clearing in wetlands. Method 3 mechanized clearing, which is a 10-foot swath along the toe of fill, will be used throughout this project. The total permanent wetland impacts for the entire project (4.42 acres) are greater than what was initially discussed (3.95 acres) throughout the Merger Process. There are two main reasons for the discrepancy in wetland impacts: a) the initial impacts did not account for mechanized clearing, and b) an additional wetland impact site was identified in Section B due to a dammed pond located along NC 55 (Site 4).

Temporary Impacts: No temporary impacts will occur during construction of the proposed project or as a result of utility relocations.

Utility Impacts: The utility companies have developed relocation plans and have determined that no utility impacts to jurisdictional areas are anticipated from construction of this project except at Site 4, where the aerial power lines will have to be moved slightly north to accommodate the roadway widening. With the exception of minimal impacts expected to occur at Site 4, all utility relocations have been kept within their existing alignments or are contained within the footprint of the roadway. The overhead power line will span the wetland, and impacts will be covered by a Nationwide Permit 12 that will be obtained by the utility company.

8.0 Protected Species

Plants and animals with federal classification of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. The United States Fish and Wildlife Service (USFWS, 2006) lists six (6) federally protected species for Craven County as of the May 10, 2007 listing (Table 4).

Table 4. Federally Protected Species in Craven County

Common Name	Scientific Name	Federal Status	Biological Conclusion
American alligator	*Alligator mississippiensis*	T (S/A)	N/A
Bald eagle	*Haliaeetus leucocephalus*	T	No Effect
Leatherback sea turtle	*Dermochelys coriacea*	E	No Effect
Red-cockaded woodpecker	*Picoides borealis*	E	No Effect
West Indian manatee	*Trichechus manatus*	E	No Effect
Sensitive joint-vetch	*Aeschynomene virginica*	T	No Effect

Wildlife observations were made in conjunction with the investigation of biotic communities performed by Stantec. In addition to the field surveys, the NC Natural Heritage Program (NCNHP) database was reviewed by NCDOT in May 2007 for recorded occurrences of protected species. No occurrences of federally protected species were recorded for the project study area. Biological conclusions of "No Effect" were reached for all six federally protected species listed for Craven

County. The biological surveys indicated that no habitat for the red-cockaded woodpecker, bald eagle, leatherback sea turtle, West-Indian manatee and sensitive joint vetch is present within the project boundaries.

9.0 Cultural Resources

The potential of the NC 43 Connector to impact cultural resources was evaluated in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended. Potential effects were determined using Criteria for Effect and Adverse Effect (36 CFR 800.9) developed by the Advisory Council on Historic Preservation. Concurrence on the eligibility of each property with respect to inclusion on the national Register of Historic Places and the final determination of effects were made by the State Historic Preservation Office (SHPO).

There are no known structures of historical or architectural importance within the project corridor. As stated in the EA, the project study area contains one property (Elijah Farrow Farm) that is eligible for the National Register of Historic Places; however, the property is outside the project corridor. The SHPO concluded that the R-4463 would have No Effect on the Elijah Farrow Farm property. The SHPO concurrence forms are included in Appendix A of the FONSI.

10.0 FEMA Compliance

The project has been coordinated with appropriate state and local officials and the Federal Emergency Management Agency (FEMA) to assure compliance with FEMA, state, and local floodway regulations.

11.0 Essential Fish Habitat / Aquatic Life Movement Status

No Essential Fish Habitat is present in the project corridor; therefore, no designs are necessary to ensure fish and other aquatic life passage.

12.0 Mitigation Options

The USACE has adopted, through the Council on Environmental Quality (CEQ), a wetland mitigation policy that embraces the concept of "no net loss of wetlands" and sequencing. The purpose of this policy is to restore and maintain the chemical, biological, and physical integrity of the Waters of the United States. Mitigation of wetland and surface water impacts has been defined by the CEQ to include: avoiding impacts, minimizing impacts, rectifying impacts, reducing impacts over time and compensating for impacts (40 CFR 1508.20). Executive Order 11990 (Protection of Wetlands) and Department of Transportation Order 5660.1A (Preservation of the Nations Wetlands), emphasize protection of the functions and values provided by wetlands. These directives require that new construction in wetlands be avoided as much as possible and that all practicable measures are taken to minimize or mitigate impacts to wetlands.

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts, and to provide full compensatory mitigation of all remaining, unavoidable jurisdictional impacts. Avoidance measures were taken during the planning and NEPA compliance stages; minimization measures were incorporated as part of the project design.

12.1 Avoidance

All jurisdictional features were delineated, field verified and surveyed within the corridor for the NC 43 Connector. The delineation corridor varies in width from approximately 2,200 to 6,000 feet and is approximately 4.5 miles in length along new location (see Exhibit 1.1.3 in NRTR). Using these surveyed features, preliminary designs were adjusted to avoid and / or minimize impacts to jurisdictional areas. All wetland areas not affected by the project will be protected from unnecessary encroachment. Individual avoidance items are as follows:

- No staging of construction equipment or storage of construction supplies will be allowed in any jurisdictional areas.

- Aligning the footprint of the NC 43 Connector to avoid the large swamp forest / wet pine flat pocosin wetland located in the southern portion of the study area.

12.2 Minimization

Minimization includes the examination of appropriate and practicable steps to reduce unavoidable adverse impacts. NCDOT employs many strategies to minimize impacts to jurisdictional areas in all of its designs. Many of these strategies have been incorporated into BMP documents that have been reviewed and approved by the resource agencies and which will be followed throughout construction.

Listed below minimization measures pertinent to this project.

- At locations where wetland impacts are likely, the preliminary design was developed to preserve the largest amount of contiguous wetland area.
- Crossings of jurisdictional areas were angled to cross as perpendicular as possible to minimize impacts.
- All fill slopes in jurisdictional areas will be 3:1.
- Strict enforcement of sedimentation and erosion control BMPs.
- Installation of temporary sediment control fences, earth berms, and temporary ground cover during construction.
- This permit application presents the maximum potential impacts currently associated with the preliminary designs of Section A. Avoidance and minimization measures are being considered and evaluated for this section; therefore, actual impacts should be less than those reported in this document. Design for Section A will be coordinated with relevant review agencies during 4B and 4C Concurrence meeting.
- As much stormwater as possible will be redirected at non-erosive velocites in the remaining portions of the Site 3 wetland in an effort to retain as much hydrology as possible.
- In lieu of a ramp in the southeast quadrant of the interchange at US 70, the interchange will be constructed with a ramp/loop configuration in the southwest quadrant. However, the NCDOT will purchase right-of-way for a future ramp in the southeast quadrant should it be warranted by future traffic volumes or after the construction of the (currently unfunded) NC 43 Connector south of US 70.

- To minimize noise impacts, a noise wall is proposed along the western boundary of the Trent Creek subdivision, just north of US 17. This commitment is subject to a detailed design noise study and additional public involvement efforts.
- NCDOT agreed to construct a wildlife crossing for small animal passage south of US 70 along the NC 43 Connector (Section A). The animal passage design was to be subject to approval by the USFWS and the NC Wildlife Resources Commission (NCWRC). After reviewing the project and the surrounding land use, the NCWRC and USFWS concluded that such a crossing was not necessary and therefore will not be incorporated into the final design.

12.3 Compensation

The primary emphasis of the compensatory mitigation is to reestablish a condition that would have existed if the project were not built. As previously stated, mitigation is limited to reasonable expenditures and practicable considerations related to highway operation. Mitigation is generally accomplished through a combination of methods designed to replace wetland functions and values lost as a result of construction of the project. These methods consist of creation of new wetlands from uplands, borrow pits, and other non-wetland areas; restoration of wetlands; and enhancement of existing wetlands. Where such options may not be available, or when existing wetlands and wetland-surface water complexes are considered to be important resources worthy of preservation, consideration is given to preservation as at least one component of a compensatory mitigation proposal.

12.3.1 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 EEP. The NCDOT has avoided and minimized impacts to jurisdictional resources to the greatest extent possible as described above. The remaining, unavoidable impacts to 4.42 acres of jurisdictional wetlands will be offset by compensatory mitigation provided by the EEP program.

The initial request letter sent to the EEP on January 10, 2006 did not account for mechanized clearing and excavation in wetlands as well as the wetland impacts for Site 4. A copy of the revised EEP acceptance letter dated May 21, 2007 is included in Appendix D of this application.

13.0 Indirect and Cumulative Effects

A qualitative Indirect and Cumulative Impacts (ICI) Assessment was completed for the NCDOT in January 2005, by Stantec Consulting Services. Some recommendations contained in the ICI Assessment regarding avoidance and minimization of potential indirect impacts were outside the NCDOT's jurisdiction. These were discussed with City of New Bern officials. The City responded favorably to the recommended measures stating "...many of the recommendations complement city initiatives to encourage more environmentally sound development." In response to further concerns from the NEPA/404 merger team, a quantitative watershed modeling report was conducted to evaluate the potential increases in storm water runoff, and non-point sources of nitrogen, phosphorous and sediment. These constituents were modeled for No-Build, Build, and Enhanced-Build scenarios (the latter incorporating the proposed enhanced avoidance and minimization measures). Results showed that the additional measures proposed by the City of New Bern in the

Enhanced-Build scenario were effective in decreasing storm event run-off and pollutant loading to near or below levels predicted in the no-build scenario.

Proposed control of access along the alignment on new location will also minimize some cumulative effects. Impacts will more likely be associated with direct impacts from the construction of TIP R-4463, and less the result of indirect impacts as the result of future land use changes. Additional copies of the January 2005 ICI Assessment and the February 2006 ICI Water Quality Study Report are available upon request.

14.0 Regulatory Approvals

Section 404: Application is hereby made for a Department of Army Individual 404 Permit as required for the above-described activities.

Section 401: We are also requesting a 401 Water Quality Certification from the Division of Water Quality. In compliance with Section 143-215.3D(e) of the NCAC, we will provide $475.00 to act as payment for processing the Section 401 permit application previously noted in this application (see Subject line). We are providing five (5) copies of this application to the NC DENR DWQ, for their review.

Coastal Area Management Act: Under a separate letter, NCDOT is requesting concurrence from the Division of Coastal Management (DCM) for the NCDOT consistency certification for the above-mentioned project.

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

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

Sincerely,

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

cc List:

W/attachment

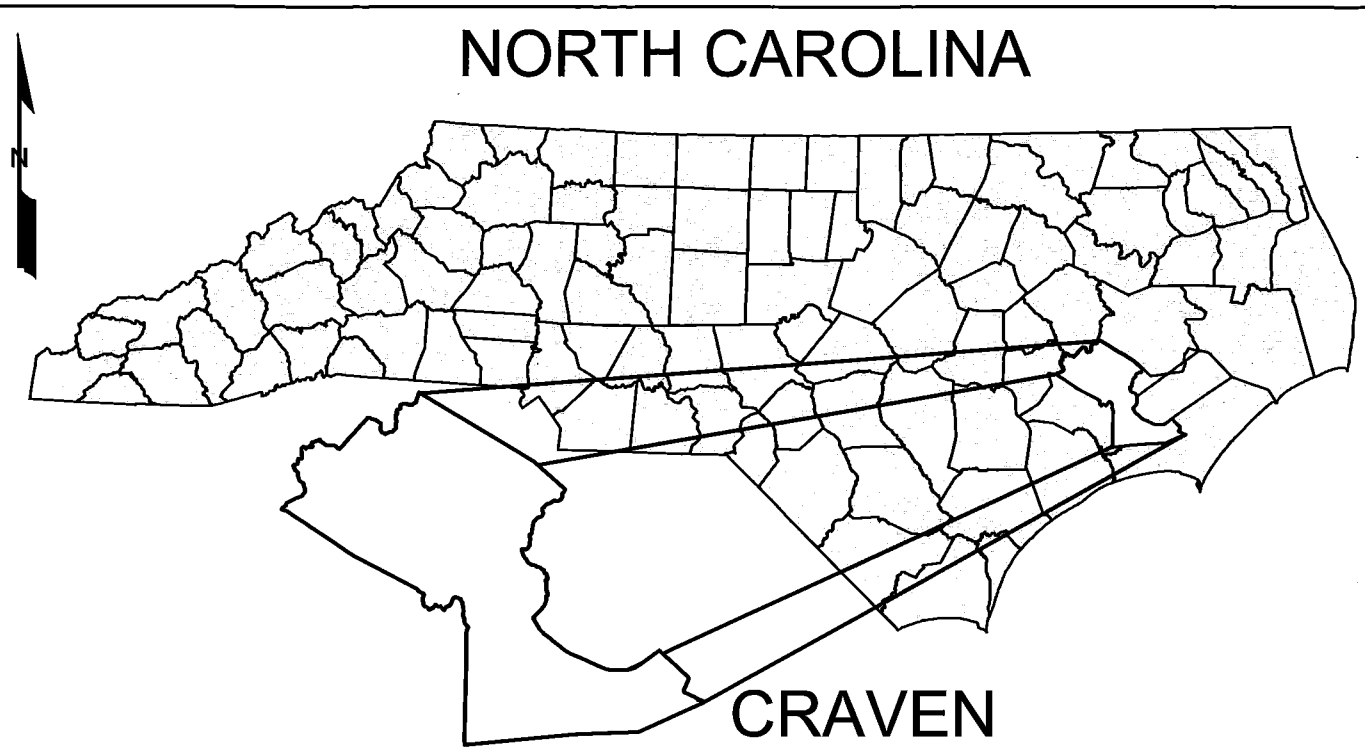
Mr. John Hennessy, NCDWQ
Mr. Travis Wilson, NCWRC
Ms. Kathy Matthews, USEPA
Mr. Ronald Mikulak, USEPA – Atlanta, GA
Mr. Clarence W. Coleman, P.E., FHWA
Mr. Gary Jordan, USFWS
Mr. Ron Sechler, NMFS
Mr. Michael Street, NCDMF
Mr. Steve Sollod, NCDCM
Mr. Stephen Lane, NCDCM
Dr. David Chang, P.E., Hydraulics
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., Division 2 Engineer
Mr. Jay Johnson, Division 2 Environmental Officer Environmental Officer

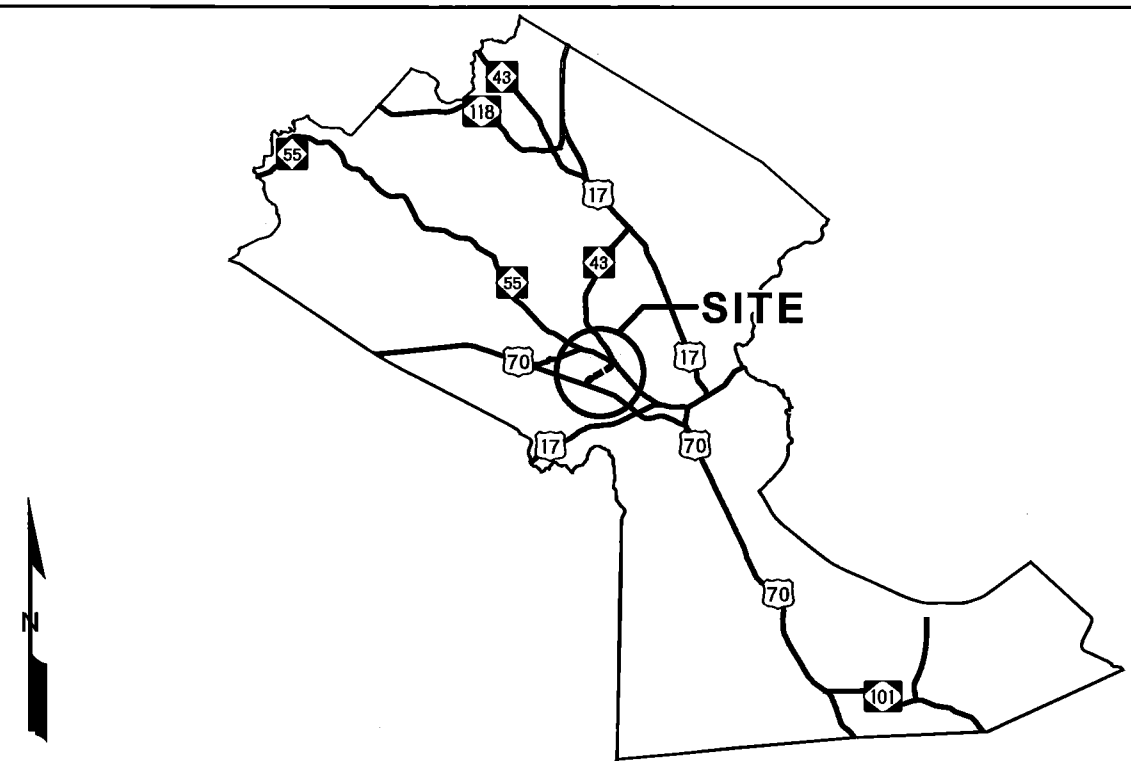
W/o attachment

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. Virginia Mabry, Alternative Delivery Unit
Ms. Stacy Oberhausen, P.E., PDEA
Mr. Carl Goode, PE, Human Environment Unit Head

APPENDIX A

Permit Drawings



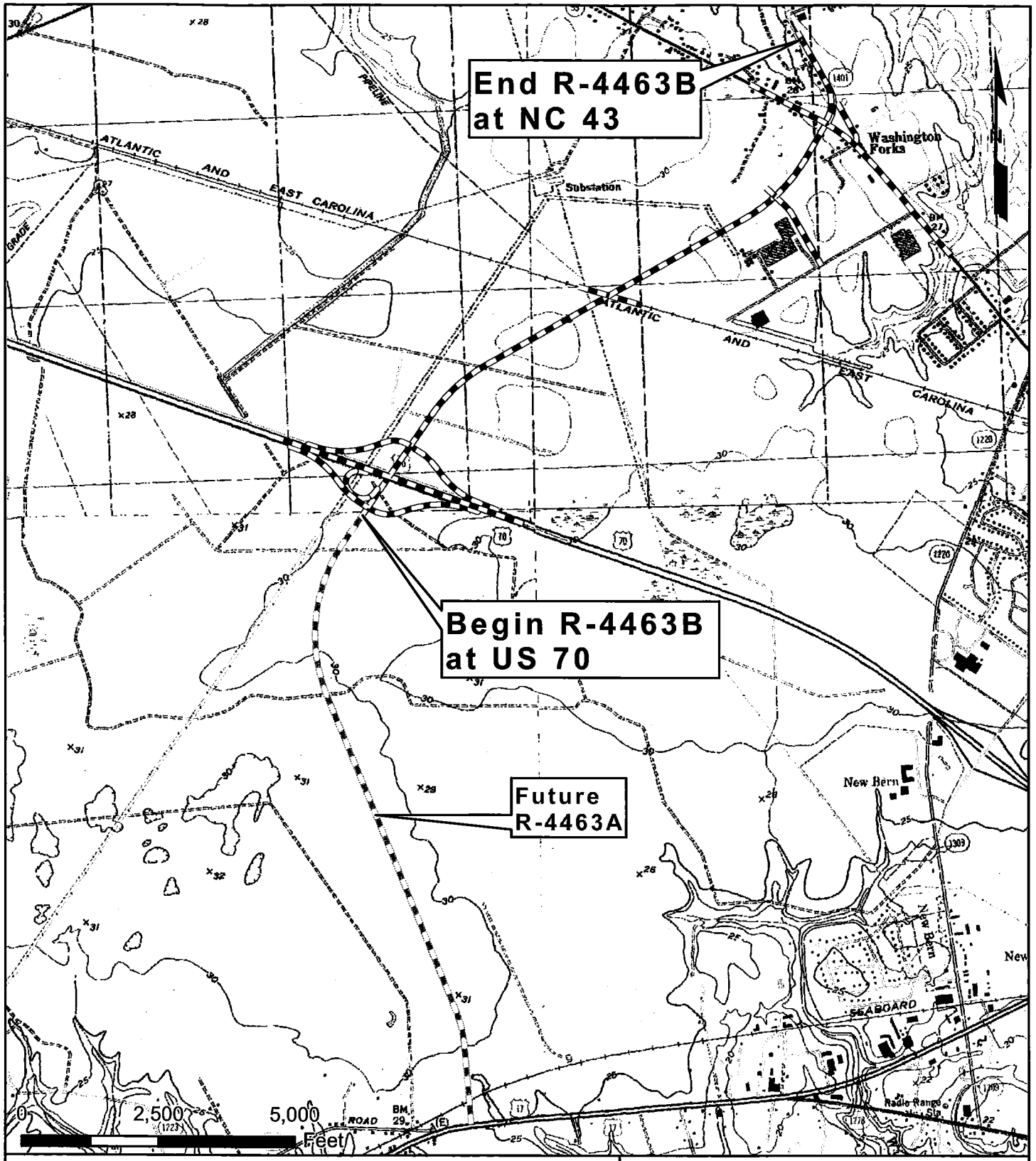


VICINITY MAPS

NCDOT

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

03/26/07



1 inch equals 2,500 feet

LOCATION

NCDOT

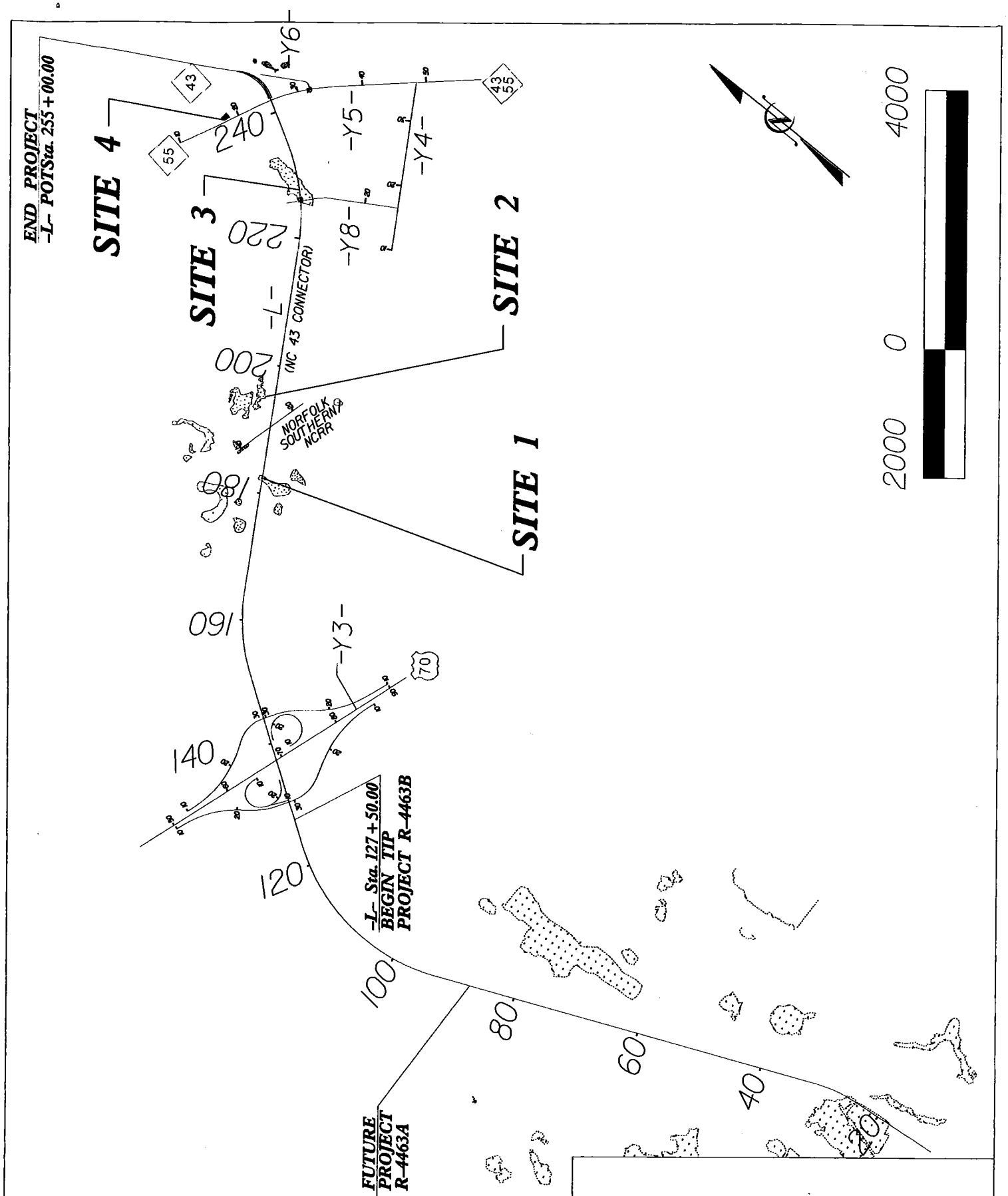
DIVISION OF HIGHWAYS
CRAVEN COUNTY
PROJECT: 35601.3.2 (R-4463B)
NC 43 CONNECTOR

03/26/07

T:\BRIDGE_Maps\R-4463B\R4463B_USGS.mxd Created: 3/1/2007

Source: USGS 7.5 Minute Quadrangle - Jasper, Askin, New Bern, & Pollocksville, NC

2



SITE MAP

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

PROJECT 35601.3.2 (R-4463B)

NC 43 CONNECTOR

04/11/07

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			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+20 to 182+76 LT & RT	Roadway	0.28	0.00	0.00	0.02	0.00	0.00	0.00	0	0	0
2	-L- 194+70 to 195+12 LT	Roadway	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0	0	0
3	-L- 224+97 to 231+13 LT & RT	Roadway	1.89	0.00	0.00	0.09	0.00	0.00	0.00	0	0	0
4	-Y5- 17+60 LT	Roadway	0.00	0.00	0.05	0.02	0.00	0.00	0.00	0	0	0
TOTALS:			2.17		0.05	0.14						

Note: Site 2 includes 1.3 square feet of fill in wetland (rounds to 0.000 acres)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

4/11/2007

ATN Revised 3/31/05
R:\Z-MISC\HYDROW\etland 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
16	Donald K. Webb C/O mr. and Mrs. Donald Webb (refer ro parcel 16)	350 NC Hwy 55 W New Bern, NC 28562

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

CRAVEN COUNTY
PROJECT: 35601.3.2 (R-4463B)

4/11/2007

R:\Z-MISC\HYDRO\WETPROP R-4463B.XLS

5

8/1/99

REVISIONS

March 26, 2007: -L- monument at exist r/w (187+11.02)//195 Lt. was previously labeled 190' Lt.

03\26\07 09:00:40
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mcook

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

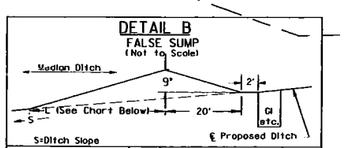
English

50 0 50 100

PLANS

03/26/07

DETAIL B
FALSE SUMP
(Not to Scale)

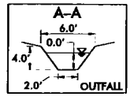


S=Ditch Slope

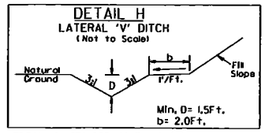
Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

-L- STA. 182+68 CL

A-A



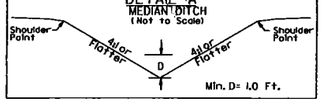
DETAIL H
LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1.5Ft.
b= 2.0Ft.

FROM -L- STA. 185+10 TO STA. 187+50 LT

DETAIL A
MEDIAN DITCH
(Not to Scale)



Min. D= 1.0 Ft.

FROM -L- STA. 174+50 TO STA. 176+50

NAD 83/95

WLB

WEYERHAEUSER COMPANY (1)

180

185

MATCHLINE -L- STA. 174+50 SEE SHEET 6

MATCHLINE -L- STA. 187+50 SEE SHEET 8

5 TONS CL B RIPRAP W/14 SY FIL FAB INV=23.70

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=27.05

2 ELBOWS W/ FOOT LUG CONNECTIONS

CAT-1 BCCS

2GI/B FLAT

SP MED CUT DITCH SEE DETAIL A

GRAU 350

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=26.56

48" WW FENCE

FS DET. B

3 TONS CL B RIPRAP W/10 SY FIL FAB INV=22.50

CLASS IV

LATERAL V DITCH SEE DETAIL H

-L- EXIST. EASEMENT PROP. R/W

OPAL EXISTING ELECTRIC EASEMENT

-L- EXIST. 280' RT.

SITE 1

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SEE SHT. 21 FOR -L- PROFILE

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

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

English

50 0 50 100

PLANS

03/26/07

REVISIONS

8/17/99

March 26, 2007: -L- monument at exist r/w (187+11.02)/195' Lt. was previously labeled 190' Lt.

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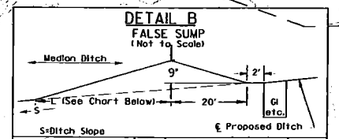
mmack

NAD 83/95

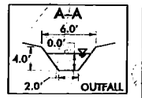
DETAIL B
FALSE SUMP
(Not to Scale)



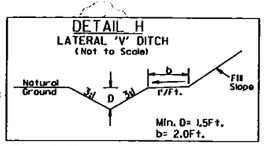
S-Ditch Slope			
Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

-L- STA. 182+68 CL

A-A

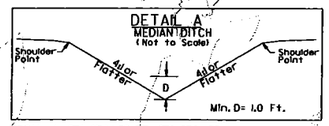


DETAIL H
LATERAL 'V' DITCH
(Not to Scale)



FROM -L- STA. 185+10 TO STA. 187+50 LT

DETAIL A
MEDIAN DITCH
(Not to Scale)



FROM -L- STA. 174+50 TO STA. 176+50

MATCHLINE -L- STA. 174+50 SEE SHEET 6

MATCHLINE -L- STA. 187+50 SEE SHEET 8

WEYERHAEUSER COMPANY (1)

WLB

23.67

5 TONS CL B RIPRAP W/14 SY FIL FAB INV=23.70

24.33

372

373

2GI/B

SP MED CUT DITCH SEE DETAIL A

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=27.05

23.73

383

376

INV=23.72

2 ELBOWS W/ RODS & LUG CONNECTORS

CAT-1

15" BCCS

384

24.01

2GI/B FLAT

22.30

48" WW FENCE

C/A

RW

INV=22.64

22.45

CROSS PIPE

380

24.19

LATERAL V DITCH SEE DETAIL H

24.24

385

2GI/B / FLAT

GRAU 350

15" BCCS

2 ELBOWS W/ RODS & LUG CONNECTORS

386

375

24.03

5 TONS CL B RIPRAP W/14 SY FIL FAB INV=23.70

23.69

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=26.56

48" WW FENCE

SITE 1

WEYERHAEUSER COMPANY (1)

WLB

FS DET B

2GI/B

378

2 ELBOWS W/ RODS & LUG CONNECTORS

15" BCCS

377

25.49

CROSS PIPE

379

25.61

2 TONS CL B RIPRAP W/10 SY FIL FAB INV=22.50

25.34

-L- EXIST. EASEMENT PROP. R/W

OPAL EXISTING ELECTRIC EASEMENT

-L- EXIST. 280' RT.

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SEE SHT. 21 FOR -L- PROFILE

PLANS PREPARED BY :
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FOR
DIVISION OF HIGHWAYS 7

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

English

50 0 50 100

MCR PROPERTIES LLC 03/26/07

(2)

8/7/98

REVISIONS

March 26, 2007: -L- monument at existing r/w (193+84.65) (205' Rt. was previously labeled 200' Rt.

MATCHLINE -L- STA. 187+50 SEE SHEET 7

MATCHLINE -L- STA. 202+00 SEE SHEET 9

CAROLINA POWER & LIGHT COMPANY

DETAIL A
MEDIAN DITCH
(Not to Scale)

Min. D= 1.0 Ft.

FROM -L- STA. 188+00 TO STA. 189+50
FROM -L- STA. 191+00 TO STA. 193+50

DETAIL B
FALSE SUMP
(Not to Scale)

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. 198+22 CL

DETAIL G
CONCRETE LINED DITCH
(Not to Scale)

-L- STA. 189+20 LT, APPR. LENGTH=145'
-L- STA. 190+40 RT, APPR. LENGTH=100'
-L- STA. 190+45 LT, APPR. LENGTH=50'
-L- STA. 191+60 RT, APPR. LENGTH=145'

DETAIL F
LATERAL 'V' DITCH
(Not to Scale)

Min. D= 1.0Ft.
b= 2.0Ft.

FROM -L- STA. 192+65 TO STA. 194+05 RT

DETAIL I
TAIL DITCH
(Not to Scale)

Min. D= 1.0 Ft.
* Line ditch with PSRM

* -L- STA. 190+40 RT, L=50', S=34.00%, DDE=NA
-L- STA. 190+40 RT, L=45', S=0.22%, DDE=5 CY
* -L- STA. 190+45 LT, L=60', S=33.76%, DDE=NA

DETAIL J
LATERAL 'V' DITCH
(Not to Scale)

Min. D= 0.5Ft.
b= 2.0Ft.

FROM -L- STA. 190+38 TO STA. 190+75 LT (ACTUAL LENGTH=140')
FROM -L- STA. 190+46 TO STA. 190+77 RT (ACTUAL LENGTH=100')

A–A
B–B

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

Min. D= 1.5Ft.
b= 2.0Ft.

FROM -L- STA. 187+50 TO STA. 188+15 LT

NAD 83 79S

SITE 2

WLB

MECHANIZED CLEARING

FILL IN WETLAND

2 TONS CL B RIPRAP W/7 SY FIL FAB

5 TONS CL B RIPRAP W/14 SY FIL FAB INV=20.29

LATERAL V DITCH SEE DETAIL H

NORTH CAROLINA RAILROAD COMPANY NORFOLK SOUTHERN CORPORATION R/W 200'

CONCRETE LINED DITCH SEE DETAIL G

LATERAL V DITCH SEE DETAIL J

TAIL DITCH SEE DETAIL I

CL IV METHOD B

END BRIDGE -L- 191+06.56

END APPROACH SLAB -L- 191+30.16

TYPE III

TYPE M350 SP MED. CUT DITCH SEE DETAIL A

BEGIN APPROACH SLAB -L- 189+55.31

BEGIN BRIDGE -L- 189+78.90

WEYERHAEUSER COMPANY

-L- EXIST. EASEMENT 305' RT.

-L- EXIST. EASEMENT 285' RT.

48" W W FENCE

2 ELBOWS W/ ROD & LUG CONNECTORS

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=25.11

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=23.51

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=23.69

15" BCCS

2GI/B / FLAT

FS DET B

INV=20.40

CP&L EXISTING ELECTRIC 28' EASEMENT

NORTH CAROLINA NATURAL GAS 30' EASEMENT

-L- +00.00 220.00' RT.

-L- +20.00 270' RT.

MCR PROPERTIES LLC

(1)

BRIDGE ON -L- OVER RAILROAD NTS

SHOULDER BERM GUTTER

△ = 45° 28' 08"

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SEE SHTS. 21 & 22 FOR -L- PROFILE

PLANS PREPARED BY :
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FOR
DIVISION OF HIGHWAYS

8

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

English

50 0 50 100

MGR PROPERTIES LLC 03/26/07

REVISIONS

March 26,2007: -L- monument at existing r/w(193+84.65)/205' Rt.was previously labeled 200' Rt.

8/1/18

CAROLINA POWER & LIGHT COMPANY

DETAIL A
MEDIAN DITCH
(Not to Scale)

Min. D= 1.0 Ft.

FROM -L- STA. 188+00 TO STA. 189+50
FROM -L- STA. 191+00 TO STA. 193+50

DETAIL B
FALSE SUMP
(Not to Scale)

Median Ditch — 9' — 2' — 20' — GI etc. — ℄ Proposed Ditch

-L- (See Chart Below) — S

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. 198+22 CL

DETAIL G
CONCRETE LINED DITCH
(Not to Scale)

4 Ft. — 0.5 Ft. min — 1Ft. — FILL SLOPE 3:1 OR STEEPER — 2d — 0.5Ft.+/- — Wall/Barrier

-L- STA. 189+20 LT, APPR. LENGTH=145'
-L- STA. 190+40 RT, APPR. LENGTH=100'
-L- STA. 190+45 LT, APPR. LENGTH=50'
-L- STA. 191+60 RT, APPR. LENGTH=145'

DETAIL F
LATERAL 'V' DITCH
(Not to Scale)

Natural Ground — 3:1 — D — 3:1 — b — F/Fft. — Fill Slope

Min. D= 1.0Ft.
b= 2.0Ft.

FROM -L- STA. 192+65 TO STA. 194+05 RT

DETAIL I
TAIL DITCH
(Not to Scale)

Fill Slope or Natural Ground — 3:1 — D — 3:1 — Fill Slope or Natural Ground

Min. D= 1.0 Ft.
• Line ditch with PSRM

• -L- STA. 190+40 RT, L=50', S=34.00%, DDE=NA
-L- STA. 190+40 RT, L=45', S=0.22%, DDE=5 CY
• -L- STA. 190+45 LT, L=60', S=33.76%, DDE=NA

DETAIL J
LATERAL 'V' DITCH
(Not to Scale)

Natural Ground — 3:1 — D — 3:1 — b — F/Fft. — Fill Slope

Min. D= 0.5Ft.
b= 2.0Ft.

FROM -L- STA. 190+38 TO STA. 190+75 LT (ACTUAL LENGTH=140')
FROM -L- STA. 190+46 TO STA. 190+77 RT (ACTUAL LENGTH=100')

A–A
5.0' — 0.0' — 3.0' — 1.5' OUTFALL

B–B
23.0' — 0.0' — 6.0' — 2.0' OUTFALL

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

Natural Ground — 3:1 — D — 3:1 — b — F/Fft. — Fill Slope

Min. D= 1.5Ft.
b= 2.0Ft.

FROM -L- STA. 187+50 TO STA. 188+15 LT

WLB

SITE 2

NAD 83/95

MECHANIZED CLEARING

FILL IN WETLAND

MATCHLINE -L- STA. 187+50 SEE SHEET 7

MATCHLINE -L- STA. 202+00 SEE SHEET 9

5 TONS CL B RIPRAP W/14 SY FIL FAB INV=20.29

2 TONS CL B RIPRAP W/7 SY FIL FAB

20.21

LATERAL V DITCH SEE DETAIL H

2 TONS CL B RIPRAP W/7 SY FIL FAB

NORTH CAROLINA RAILROAD COMPANY NORFOLK SOUTHERN CORPORATION R/R 200

CONCRETE LINED DITCH SEE DETAIL G

LATERAL V DITCH SEE DETAIL J

TAIL DITCH SEE DETAIL I

CONCRETE LINED DITCH SEE DETAIL G

END BRIDGE -L- 191+06.56

END APPROACH SLAB -L- 191+30.16

CL IV METHOD B 24"

20.36

TYPE III

SP MED CUT DITCH SEE DETAIL A

TYPE M350

20.80

BEGIN APPROACH SLAB -L- 189+55.31

BEGIN BRIDGE -L- 189+78.90

TAIL DITCH SEE DETAIL I

2 TONS CL B RIPRAP W/7 SY FIL FAB

24.19

23.82

WEYERHAEUSER COMPANY

-L- EXIST. EASEMENT 305' RT.

CONCRETE LINED DITCH SEE DETAIL G

2 TONS CL B RIPRAP W/7 SY FIL FAB

LATERAL V DITCH SEE DETAIL J

INV=20.40

OPAL EXISTING ELECTRIC 28' EASEMENT

NORTH CAROLINA NATURAL GAS 30' EASEMENT

20.51

20.98

-L- EXIST. EASEMENT 285' RT.

-L- +20.00 270' RT.

-L- +00.00 220.00' RT.

48" WW FENCE

2 ELBOWS W/ ROD & LUG CONNECTORS

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=25.11

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=23.51

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=23.69

15" BCCS

2GI/B FLAT

FS DET B

MGR PROPERTIES LLC

2

1

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SEE SHTS. 21 & 22 FOR -L- PROFILE

BRIDGE ON -L- OVER RAILROAD NTS

TYPE III — 8' — 17'-8" P.S. — .025 — 5'-8" P.S. — 24" — 36' — 4" P.S. — SHOULDER BERM GUTTER — 2' — 7'-8" P.S.

-L-

△ = 45° 28' 08"

PLANS PREPARED BY :
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FOR
DIVISION OF HIGHWAYS

9

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

English

50 0 50 100

03/26/07

REVISIONS

8/1/99

KATHERINE C. HAROLDSON, et al

4

220

MGR PROPERTIES LLC

2

225

OLD FENCE POST

SITE 3

MATCHLINE -L- STA. 216+00 SEE SHEET 9

MATCHLINE -L- STA. 230+00 SEE SHEET 11

(CHORD)

48" W W FENCE

15"

FS DET B

400 2GI/B

-L-

TDE

-L- +80.00 130' RT

-L- +80.00 110' RT

WLB

5 TONS CL B RIPRAP (SIP) W/24 SY FIL FAB INV=28.41

520 INV= 23.99

3 TONS CL B RIPRAP W/10 SY FIL FAB INV=24.19

516

517 INV=25.07

TOTAL TAKE

-Y8-

MGR PROPERTIES LLC

2

AMITAL SPINNING CORP.

3

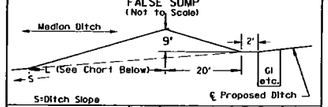
WASHINGTON FORK INVESTORS, LLC

3A

EIP

MATCHLINE -Y8- STA. 14+00 SEE SHEET 15

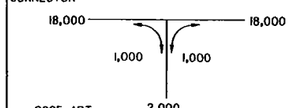
DETAIL B
FALSE SUMP
(Not to Scale)



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



2025 ADT

SR 1304
BOSCH BLVD.

PROJECTED TRAFFIC VOLUMES

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

SEE SHTS.22 & 23 FOR -L- PROFILE
SEE SHT.32 FOR -Y8- PROFILE

PLANS PREPARED BY :
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16

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

English

50 0 50 100

03/26/07

NAD 83/95

KATHERINE C. HAROLDSON, et al
4

MGR PROPERTIES LLC
2

AMITAL SPINNING CORP.
3

WASHINGTON FORK INVESTORS, LLC
3A

220

225

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

TOTAL TAKE

48" WW FENCE

(CHORD)

TDE
-L- +80.00
130' RT

TDE
-L- +80.00
110' RT

FS DET B

2GI/B

5 TONS CL B RIPRAP
W/14 SY FIL FAB
INV=25.51

3 TONS CL B RIPRAP
W/10 SY FIL FAB
INV=24.19

INV=25.07

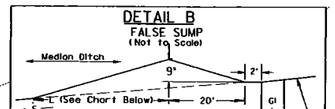
INV=23.99

WEB

-Y8-

-L-

DETAIL B
FALSE SUMP
(Not to Scale)



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
2025 ADT 2,000
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 :
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FOR
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11

REVISIONS

8/1/99

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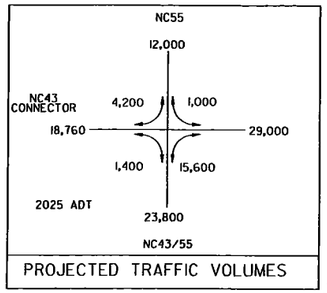
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PROJECTED TRAFFIC VOLUMES

REVISIONS

8/17/99

MATCHLINE -Y5- STA. 21+50 SEE SHEET 16

NAD 83 /95

JAMES ROBERT CIVILS, et ux

SPECIAL CUT DITCH SEE DETAIL D -Y5-

English

50 0 50 100

03/26/07

-Y5- PROP. R/W 85' LT.

NO DEFINED INFALL

INV= 25.94

COVERT CB TO TBJB W/MH

GR-PARKING AREA

MATCHLINE -L- STA. 244+00 SEE SHEET 12

SITE 3

MATCHLINE -L- STA. 230+00 SEE SHEET 10

REBA H. GRIFFIN

HELMUT TRESCHAN

KATHERINE C. HAROLDSON, et al

WLB

235

240

(CHORD)

48" WW FENCE

SP MED CUT DITCH SEE DETAIL A

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=26.72

DETAIL A
MEDIAN DITCH
(Not to Scale)
Shoulder Point
4:1 or Flatter
D
Min. D= 1.0 Ft.

FROM -L- STA. 231+50 TO STA. 234+00

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground
3:1
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

MGR PROPERTIES LLC

LEAMON C. PACE SR.,et ux

KATHERINE C. HAROLDSON, et al

NO DEFINED INFALL

INV=25.48

INV=25.32

TBJB w/MH

2 TONS CL B RIPRAP W/7 SY FIL FAB INV=29.25

PATRICIA T. TRIPP & TERESA TRIPP

-Y5- PROP. R/W 120.00' LT.

-Y5- +00.00 120' LT.

RICHARD F. ORDIWAY

PATRICIA T. TRIPP & TERESA TRIPP DB 1636 PG 916

MATCHLINE -Y5- STA. 30+25 SEE SHEET 17

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

PRELIMINARY PLANS

NOT FOR CONSTRUCTION

English

50 0 50 100

03/26/07

REVISIONS

8/1/99

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

MATCHLINE -Y5- STA. 21+50 SEE SHEET 16

NAD 83 /95

SITE 3

MATCHLINE -L- STA. 230+00 SEE SHEET 10

MATCHLINE -L- STA. 244+00 SEE SHEET 12

MATCHLINE -Y5- STA. 30+25 SEE SHEET 17

JAMES ROBERT CIVILS, et ux

REBA H. GRIFFIN

KATHERINE C. HAROLDSON, et al

BRECMUT TRESCHAN

MCR PROPERTIES LLC

LEAMON C. PACE SR., et ux

RICHARD F. ORDIWAY

PATRICIA T. TRIPP & TERESA TRIPP

(CHORD)

48" WW FENCE

NO DEFINED INFALL

COVERT OR TO TBJB W/MH

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

-Y5- PROP. R/W 85' LT.

-Y5- PROP. R/W 120.00' LT.

-Y5- +00.00 120' LT.

SPECIAL CUT DITCH SEE DETAIL D -Y5-

DETAIL A
MEDIAN DITCH
(Not to Scale)
Shoulder Point
4:1 or Flatter
D
Min. D= 1.0 Ft.

FROM -L- STA. 231+50 TO STA. 234+00

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground
3:1
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

F F 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

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mmack

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

English

50 0 50 100

PLANS

04/1/07

8/17/99

REVISIONS

SITE 4

MATCHLINE -Y5- STA. 21+50 SEE SHEET 11

-Y5-
PI Sta 13+45.90
Δ = 0° 55' 18.4" (LT)
D = 0° 07' 59.7"
L = 691.78'
T = 345.90'
R = 43,000.00'
Se = NC

DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground, W, D, Adjacent Flatter, Front Ditch Slope, Min. D= 1.0 Ft.

FROM -Y5- STA. 15+07 TO STA. 21+50 LT
FROM -Y5- STA. 15+16 TO STA. 21+50 RT

A-A: 8.0', 0.0', 4.0', 2.0', ROADSIDE
B-B: 4.0', 0.0', 2.0', 2.0', ROADSIDE
C-C: 8.0', 1.0', 2.0', 6.0', OUTFALL
D-D: 7.0', 0.0', 2.5', 1.0', INFALL

SEE SHT.33 FOR -Y5- PROFILE

PLANS PREPARED BY :
RUMMEL • KLEPPER & KAHL, LLP
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RALEIGH, NORTH CAROLINA 27609-3980
(919) 872-9560
FOR
DIVISION OF HIGHWAYS

14

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

English

50 0 50 100

PLANS

04/11/07

MATCHLINE -Y5- STA. 21+50 SEE SHEET 11

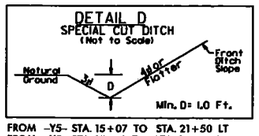
SITE 4

-Y5-
PI Sta 13+45.90
Δ = 0° 55' 18.4" (LT)
D = 0° 07' 59.7"
L = 691.78'
T = 345.90'
R = 43,000.00'
Se = NC

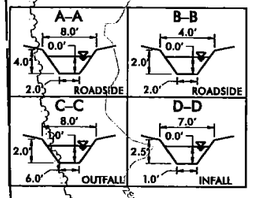
E E DENOTES EXCAVATION IN WETLAND

DENOTES MECHANIZED CLEARING

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)



FROM -Y5- STA. 15+07 TO STA. 21+50 LT
FROM -Y5- STA. 15+16 TO STA. 21+50 RT



SEE SHT.33 FOR -Y5- PROFILE

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

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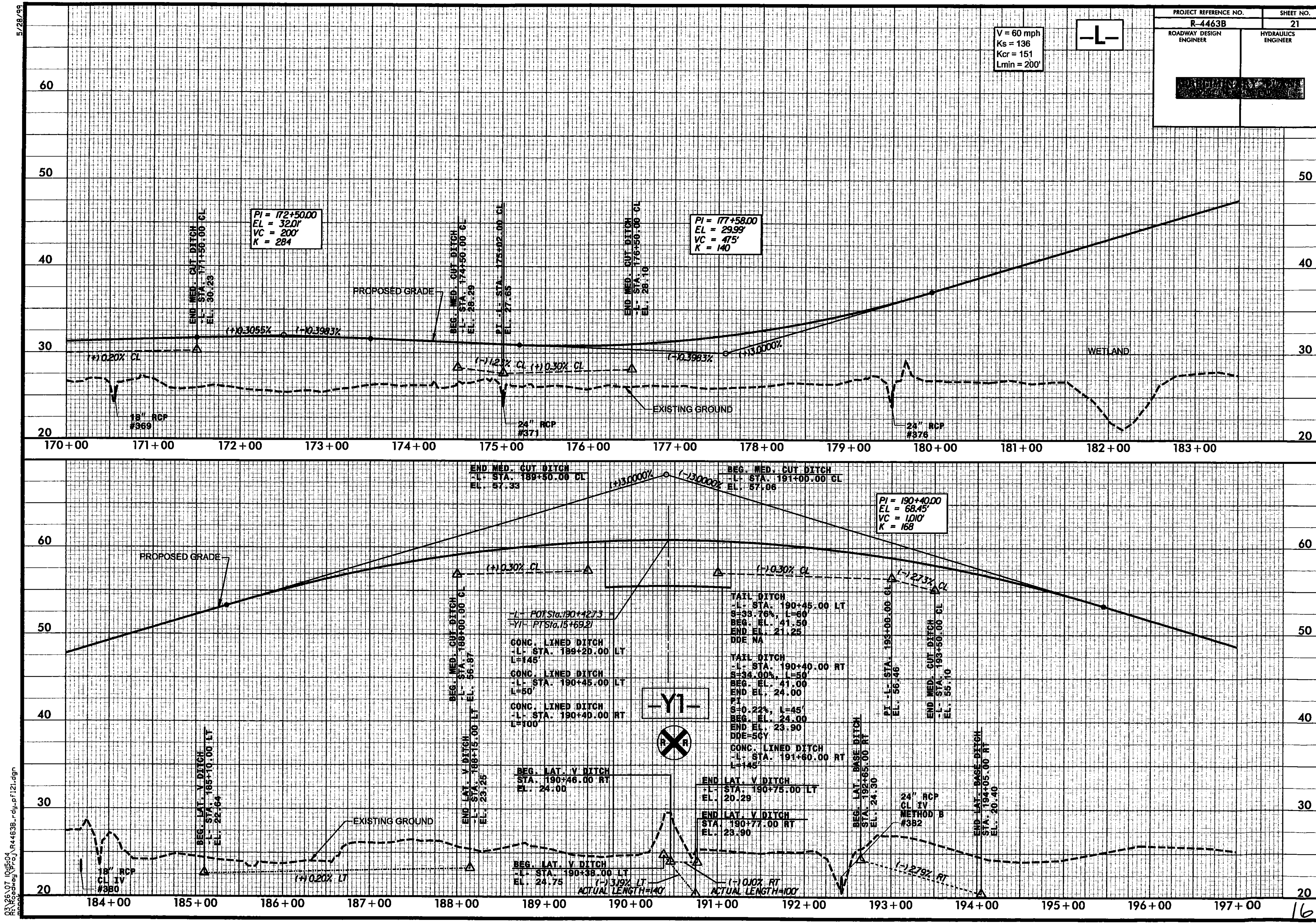

PROJECT REFERENCE NO.
R-4463B
SHEET NO.
21
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
[redacted]
V = 60 mph
Ks = 136
Kcr = 151
Lmin = 200'
-L-
PI = 172+50.00
EL = 32.01'
VC = 200'
K = 284
PI = 177+58.00
EL = 29.99'
VC = 475'
K = 140
END MED. CUT DITCH -L- STA. 171+50.00 CL EL. 30.23
BEG. MED. CUT DITCH -L- STA. 174+50.00 CL EL. 28.29
PI -L- STA. 175+02.00 CL EL. 27.65
END MED. CUT DITCH -L- STA. 176+50.00 CL EL. 28.10
PROPOSED GRADE
(+)0.3055%
(-)0.3983%
(+)0.20% CL
(-)1.23% CL
(+)0.30% CL
(+)3.0000%
WETLAND
EXISTING GROUND
18" RCP #369
24" RCP #371
24" RCP #376
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
END MED. CUT DITCH -L- STA. 189+50.00 CL EL. 57.33
BEG. MED. CUT DITCH -L- STA. 191+00.00 CL EL. 57.06
(+)3.0000%
(-)3.0000%
PI = 190+40.00
EL = 68.45'
VC = 1,010'
K = 168
PROPOSED GRADE
(+)0.30% CL
(-)0.30% CL
(-)2.73% CL
-L- POT Sta. 190+42.73
-Y1- PT Sta. 15+69.21
BEG. MED. CUT DITCH -L- STA. 188+00.00 CL EL. 56.87
CONC. LINED DITCH -L- STA. 189+20.00 LT L=145'
CONC. LINED DITCH -L- STA. 190+45.00 LT L=50'
CONC. LINED DITCH -L- STA. 190+40.00 RT L=100'
TAIL DITCH -L- STA. 190+45.00 LT S=33.76%, L=60' BEG. EL. 41.50 END EL. 21.25 DDE NA
TAIL DITCH -L- STA. 190+40.00 RT S=34.00%, L=50' BEG. EL. 41.00 END EL. 24.00
FI S=0.22%, L=45' BEG. EL. 24.00 END EL. 23.90 DDE=5CY
CONC. LINED DITCH -L- STA. 191+60.00 RT L=145'
PI -L- STA. 193+00.00 CL EL. 56.46
END MED. CUT DITCH -L- STA. 193+50.00 CL EL. 55.10
-Y1-
R X R
BEG. LAT. V DITCH -L- STA. 185+10.00 LT EL. 22.64
END LAT. V DITCH -L- STA. 188+15.00 LT EL. 23.25
BEG. LAT. V DITCH STA. 190+46.00 RT EL. 24.00
END LAT. V DITCH -L- STA. 190+75.00 LT EL. 20.29
END LAT. V DITCH STA. 190+77.00 RT EL. 23.90
BEG. LAT. V DITCH -L- STA. 190+38.00 LT EL. 24.75
BEG. LAT. BASE DITCH STA. 192+65.00 RT EL. 24.30
END LAT. BASE DITCH STA. 194+05.00 RT EL. 20.40
24" RCP CL IV METHOD B #382
18" RCP CL IV #380
EXISTING GROUND
(+)0.20% LT
(-)3.19% LT ACTUAL LENGTH=140'
(-)0.10% RT ACTUAL LENGTH=100'
(-)2.79% RT
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
20
30
40
50
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16

5/28/99

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

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

-L-

-Y8-

-L- POC Sta. 225+75.00 =
-Y8- PT Sta. 10+00.00

PI = 225+70.00
EL = 35.71'
VC = 400'
K = 383

(+)0.541% (-)0.504%

PROPOSED GRADE

WETLAND

24" RCP
#520

BEG. MED. CUT DITCH
-L- STA. 231+50.00 CL
EL. 29.87

PI -L- STA. 232+50.00 CL
EL. 29.38

END MED. CUT DITCH
-L- STA. 234+90.00 CL
EL. 29.81 LT & 29.79 RT

(-)0.49% CL

(+)0.29% CL LT

(+)0.27% CL RT

EXISTING GROUND

224+00 225+00 226+00 227+00 228+00 229+00 230+00 231+00 232+00 233+00 234+00 235+00 236+00 237+00

10 20 30 40 50

V = 50 mph
Ks = 96
Kcr = 84
Lmin = 150'

43
55

-Y5-

-L- POC Sta. 241+97.22 =
-Y5- POC Sta. 25+86.61

PI = 240+00.00
EL = 28.50'
VC = 30'
K = 100

PROPOSED GRADE

(-)0.504% (+)2.5000%

EXISTING GROUND

END GRADE
-L- Sta. 242+30.00 LT EL. 34.25' =
-NBL- Sta. 242+30.00 LA (23' LT) EL. 34.25'
-SBL- Sta. 242+30.00 LA (23' RT) EL. 34.02'

PI = 243+70.00
EL = 37.52'
VC = 280'
K = 62

PROPOSED GRADE

(+)2.5000% (-)2.0000%

EXISTING GROUND

PI = 247+10.00
EL = 30.72'
VC = 190'
K = 78

V = 40 mph
Ks = 64
Kcr = 44
Lmin = 120'

-SBL-

PI = 248+65.00
EL = 31.42'
VC = 120'
K = 160

(-)2.0000% (+)0.4500% (-)0.3000%

(+)0.4568%

BEG. LAT. BASE DITCH
-L- STA. 247+40.00 RT
EL. 23.88

(-)0.568% RT

PI -L- STA. 248+88.00 RT
EL. 22.60

(-)0.05% RT

PI = 243+70.00
EL = 37.75'
VC = 280'
K = 56

PROPOSED GRADE

(+)2.5000% (-)2.5000%

EXISTING GROUND

-NBL-

PI = 246+22.00
EL = 31.45'
VC = 200'
K = 65

PI = 247+82.00
EL = 32.35'
VC = 120'
K = 103

PI = 249+02.00
EL = 31.63'
VC = 120'
K = 400

(+)0.561% (-)0.561%

(-)0.6000% (-)78.3060%

END GRADE
-NBL- Sta. 249+65.02 (16' LT) LT EL. 31.44' =
-SBL- Sta. 249+27.12 (16' RT) LB EL. 31.23'
-L- Sta. 249+47.26 LA EL. 31.38'

END LAT. V DITCH
BEG. SPECIAL CUT DITCH
-L- STA. 248+00.00 LT
EL. 23.75

END SPECIAL CUT DITCH
-L- STA. 249+67.00 LT
EL. 25.74

BEG. LAT. V DITCH
-L- STA. 246+00.00 LT
EL. 24.35

(-)0.30% LT

24" RCP
#510

(+)1.19% LT

238+00 239+00 240+00 241+00 242+00 242+00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00

10 20 30 40 50

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17

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

-Y5-

V = 50 mph
Ks = 96
Kcr = 84
Lmin = 150'

BEGIN GRADE
-Y5- Sta. 15+35.00 EL. 28.65'

PI = 17+75.00
EL = 28.41'
VC = 350'
K = 875

PI = 20+36.00
EL = 29.19'
VC = 120'
K = 191

PI = 22+62.00
EL = 28.45'
VC = 212'
K = 81*
* 47 mph

BEG. SP. CUT DITCH
-Y5- STA. 15+16.00 RT
EL. 25.36

BEG. SP. CUT DITCH
-Y5- STA. 17+62.00 RT
EL. 24.10

END SP. CUT DITCH
-Y5- STA. 22+50.00 RT
EL. 25.15

PROPOSED GRADE

(+)0.3000%
(-)0.3292%
(+)2.3000%
(-)0.3000%
(+) 0.51% RT
(-) 0.52% LT
(+) 0.22% RT
(+) 0.26% LT
EXISTING GROUND

24" RCP
#458

BEG. SP. CUT DITCH
-Y5- STA. 15+07.00 LT
EL. 24.93

PT -Y8-
STA. 17+62.00 LT
EL. 23.82

END SP. CUT DITCH
-Y5- STA. 22+50.00 LT
EL. 25.11

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

10 20 30 40 50

-L-

V = 50 mph
Ks = 96
Kcr = 84
Lmin = 150'

PI = 25+61.51
EL = 35.33'
VC = 324'
K = 70*
* 47 mph

-Y5- Sta. 25+61.51 =
-L- Sta. 24+97.22

PI = 28+10.02
EL = 29.62'
VC = 170'
K = 85

PI = 31+27.60
EL = 28.67'
VC = 265'
K = 331

PI = 34+32.37
EL = 30.19'
VC = 120'
K = 120

PI = 36+72.80
EL = 28.99'
VC = 120'
K = 120

(+)2.3000%
(-)2.3000%
(-)2.3000%
(-)0.3000%
PROPOSED GRADE
(-)0.3000%
(+)0.5000%
(+)0.5000%
(-)0.5000%
(-)0.5000%
(+)0.5000%
EXISTING GROUND

24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00

10 20 30 40 50

2/7/2007
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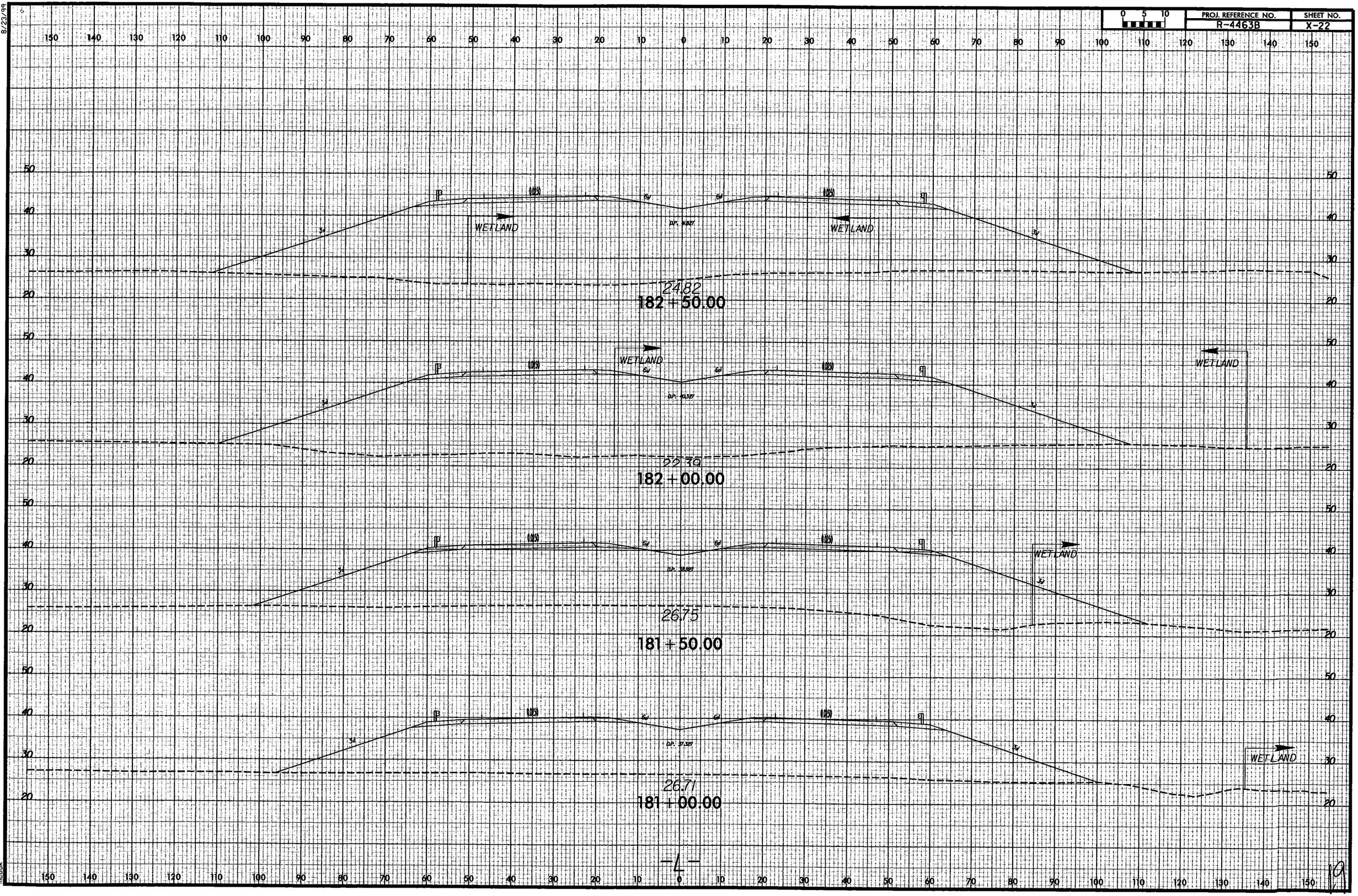
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-22



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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-30

WETLAND

24.30
195+00.00

24.05
194+50.00

24.69
194+00.00

MATCH LINE SECTION A

MATCH LINE SECTION A

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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-41

WETLAND

-Y8-
INTERSECTION

21.34
226+00.00

WETLAND

-Y8-
INTERSECTION

SHEAR POINT
Y8= 2.45000

25.45
225+50.00

SHEAR POINT
Y8= 2.75000

28.27
225+00.00

28.96
224+50.00

28.98
224+00.00

29.03
223+50.00

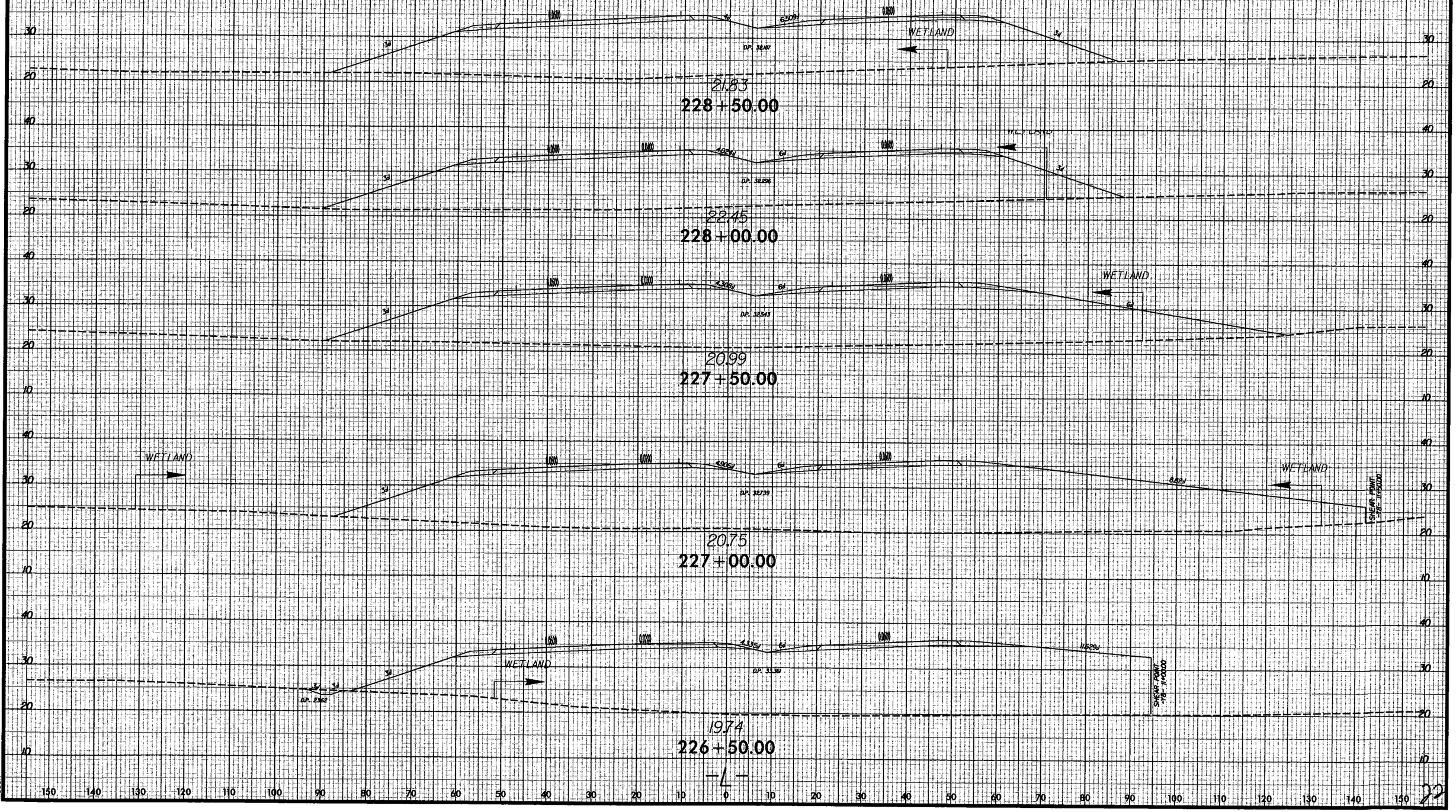
-L-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-42

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

40 30 20 40 30 20 10 40 30 20 10 40 30 20 10



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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-43

WETLAND

4J

4.76U

6J

4.37U

DP. 29+87

27.03

231+50.00

WETLAND

5J

4.39U

6J

4.24U

DP. 30+50

26.74

231+00.00

WETLAND

5J

4J

6.50FU

4.09U

DP. 31+79

26.45

230+50.00

WETLAND

5J

4J

6.50FU

3.83U

DP. 31+31

25.86

230+00.00

WETLAND

5J

4J

6.50FU

3.59U

DP. 31+83

23.78

229+50.00

WETLAND

5J

4J

6.50FU

3.25U

DP. 31+35

21.57

229+00.00

-L-

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mcook

23

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-97

WETLAND

28.23

18+00.00

WETLAND

28.26

17+50.00

28.28

17+00.00

28.26

16+50.00

28.29

16+00.00

28.31

15+50.00

28.34

15+00.00

-Y5-

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8/23/99

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-98

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

40 30 20

28.37

21+00.00

28.36

20+50.00

28.33

20+00.00

28.32

19+50.00

28.27

19+00.00

WETLAND

28.23

18+50.00

-Y5-

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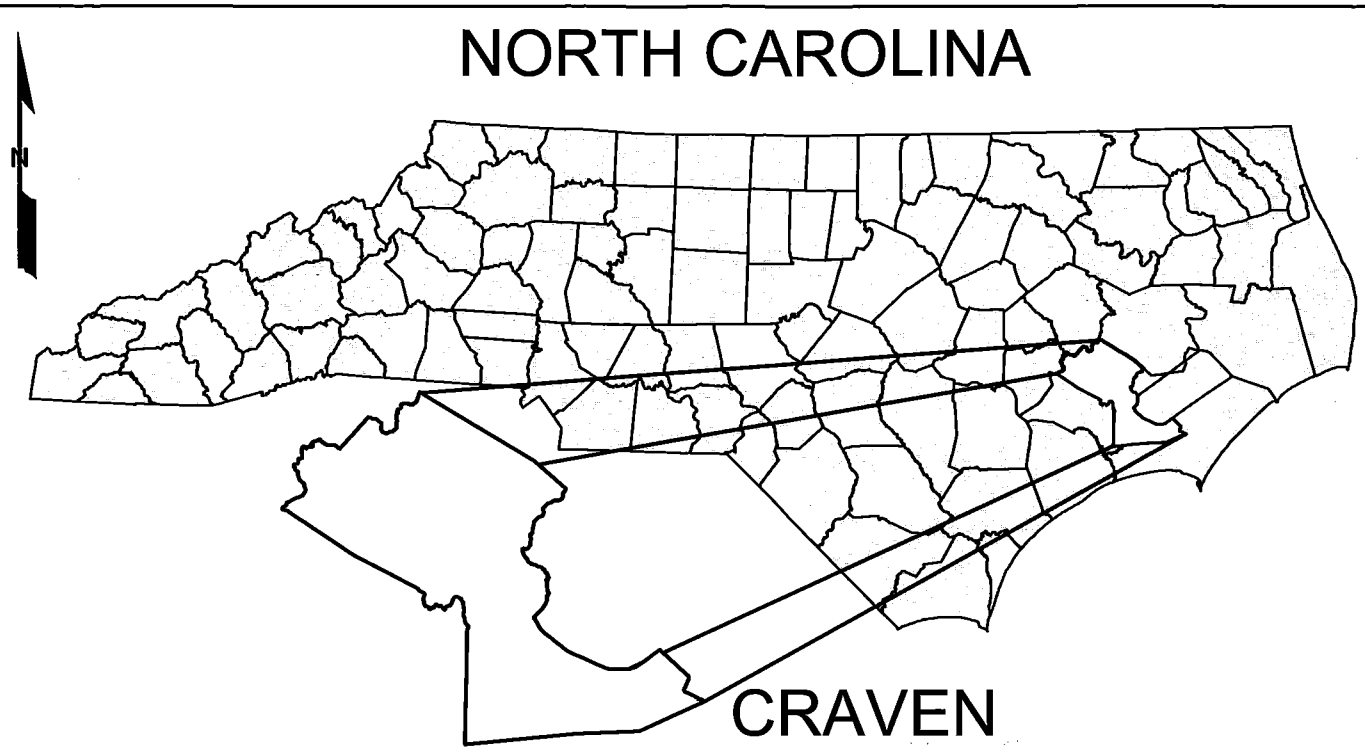
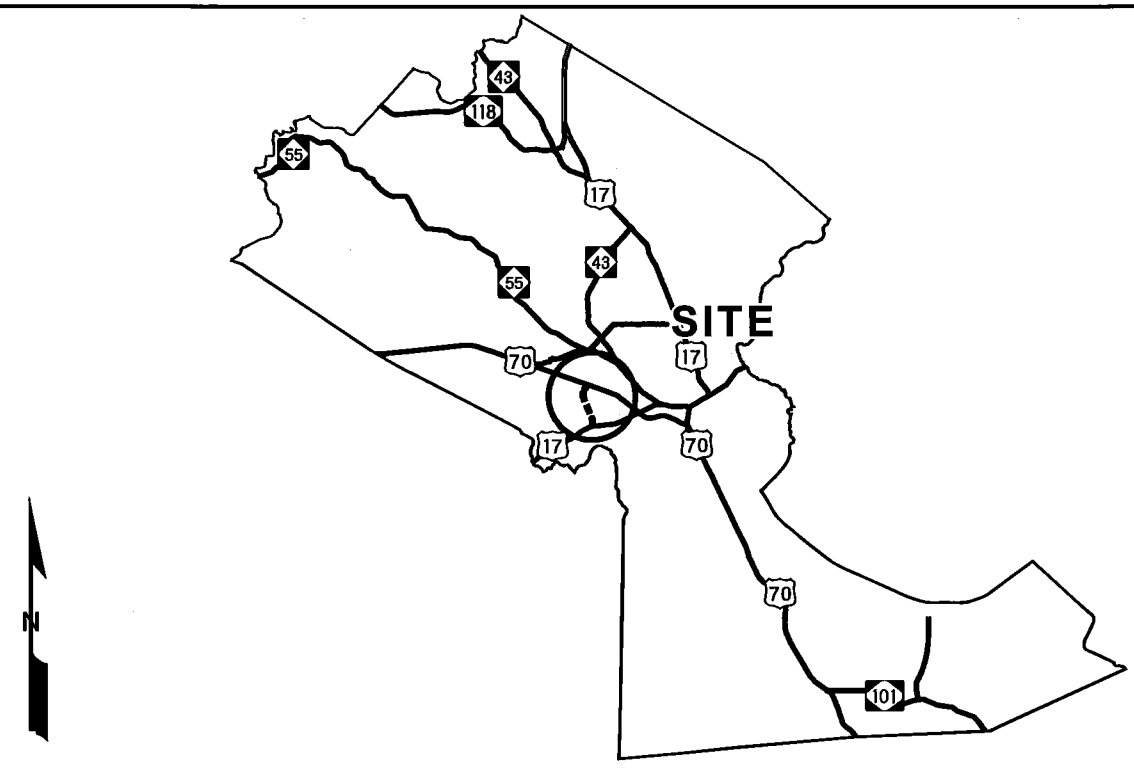
mcook



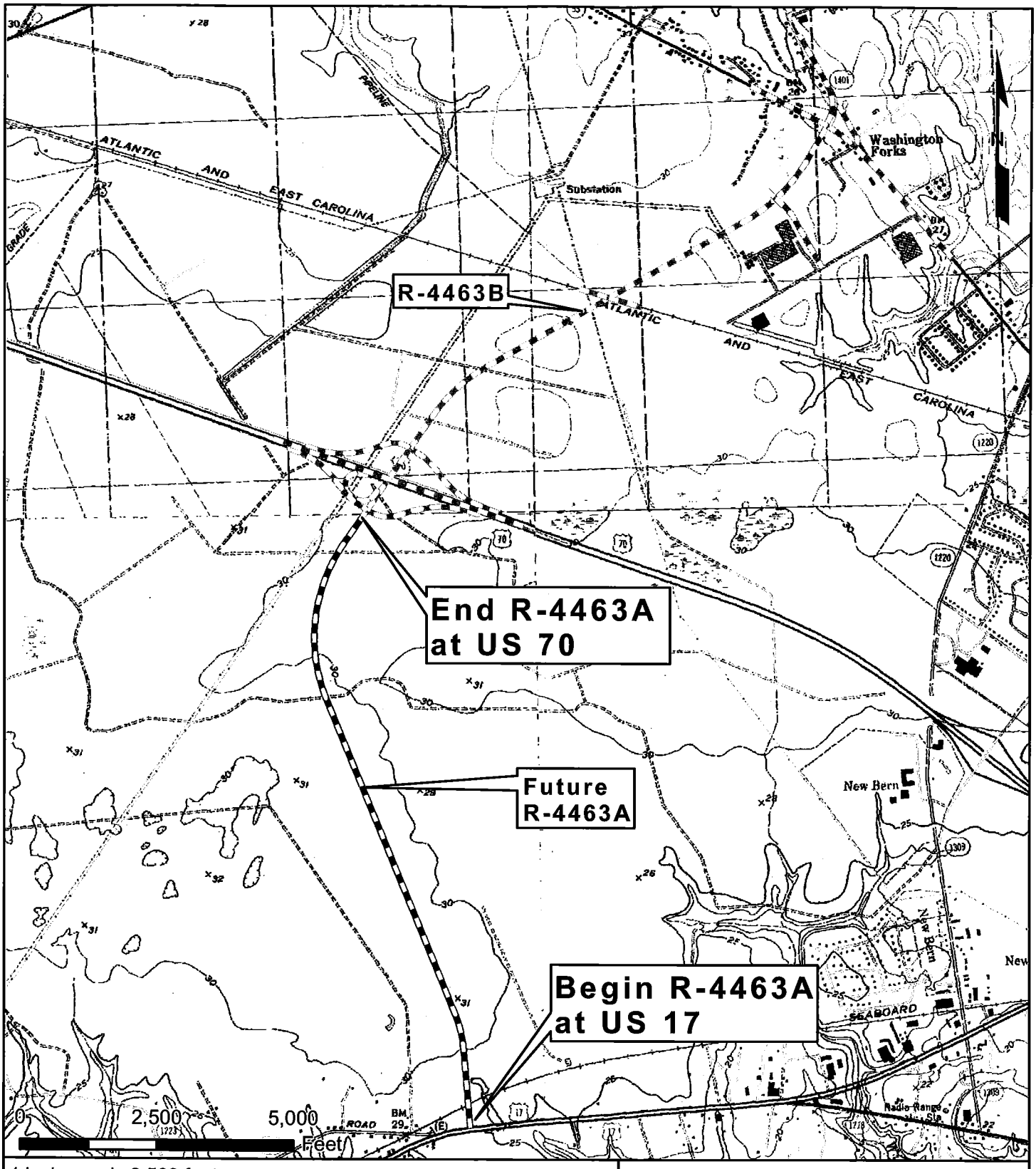


VICINITY MAPS

NCDOT

DIVISION OF HIGHWAYS
CRAVEN COUNTY
PROJECT: R-4463A
NC 43 CONNECTOR

03/26/07



1 inch equals 2,500 feet

LOCATION

NCDOT

DIVISION OF HIGHWAYS
CRAVEN COUNTY
PROJECT: R-4463A
NC 43 CONNECTOR

03/26/07

Source: USGS 7.5 Minute Quadrangle - Jasper, Askin, New Bern, & Pollocksville, NC

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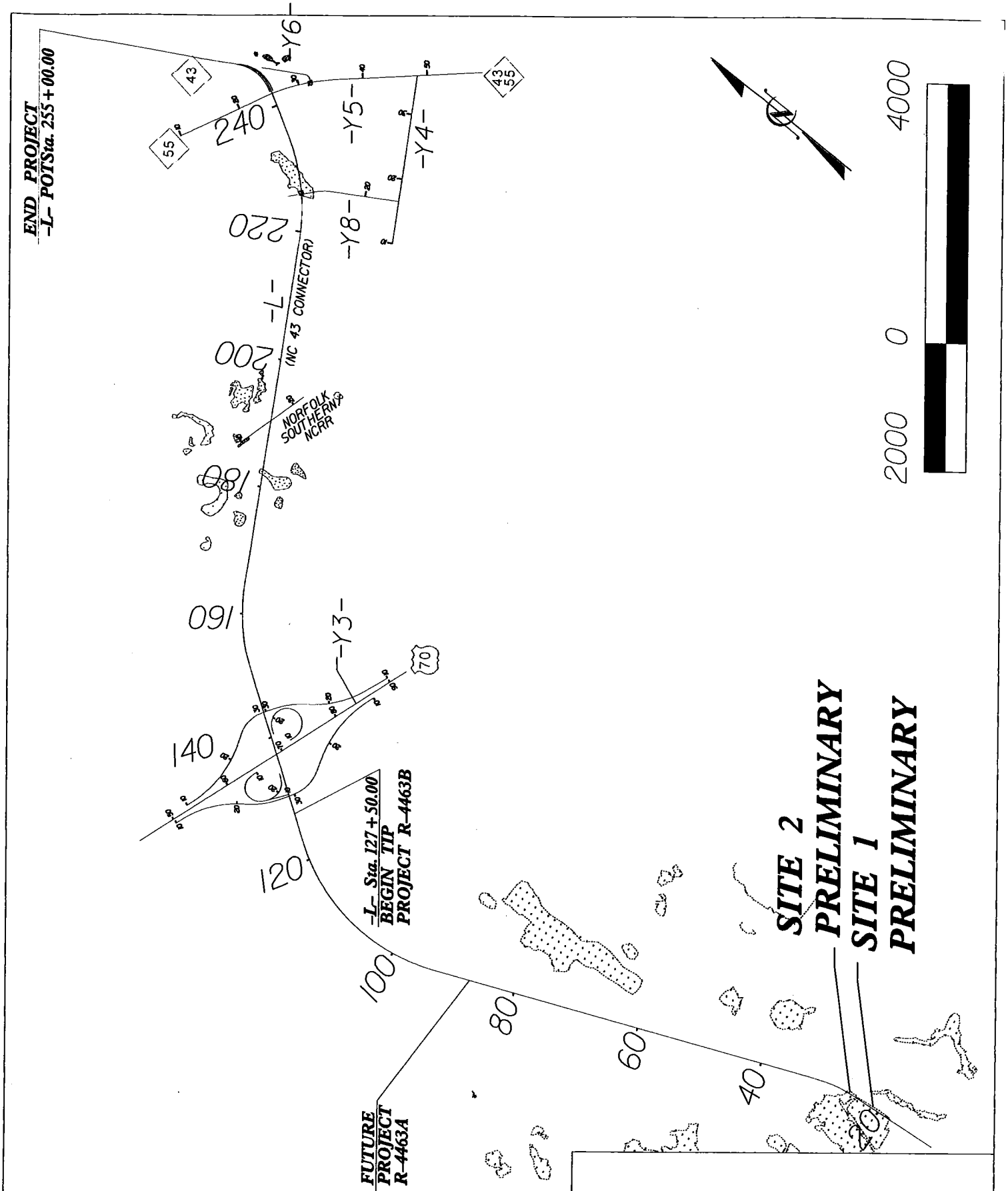

SITE MAP

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

R-4463A

NC 43 CONNECTOR

28

03 / 26 / 07

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- 17+75 to 24+25 LT (Preliminary)	Roadway	1.47	0.00	0.00	0.15	0.00	0.00	0.00	0	0	0
2	-L- 24+20 to 26+46 LT (Preliminary)	Roadway	0.40	0.00	0.00	0.04	0.00	0.00	0.00	0	0	0
TOTALS:			1.87			0.19						

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CRAVEN COUNTY
Preliminary R-4463A

3/26/2007

ATN Revised 3/31/05
R:\Z-MISC\HYDRO\Wetland Permit Summary R-4463A.xls

PROP. NO.	PROPERTY OWNER NAME	PROP. OWNER MAILING ADDRESS
69	WARD, W F JR & RAINES MARVIN L	(Preliminary)

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

CRAVEN COUNTY
Preliminary R-4463A

3/26/2007

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PROJECT REFERENCE NO.	SHEET NO.
R-4463A	2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

English

50 0 50 100

03/26/07

SITE 1
PRELIMINARY
PERMIT

REVISIONS

8/1/99

PI Sta 26+33.34

POT Sta 26+74.14

-L- N 5° 02' 49.5" W

WARD, W F JR & RAINES, MARVIN L

69

15

20

50

F F

MATCHLINE -L- STA. 22+50 SEE SHEET 3

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

3

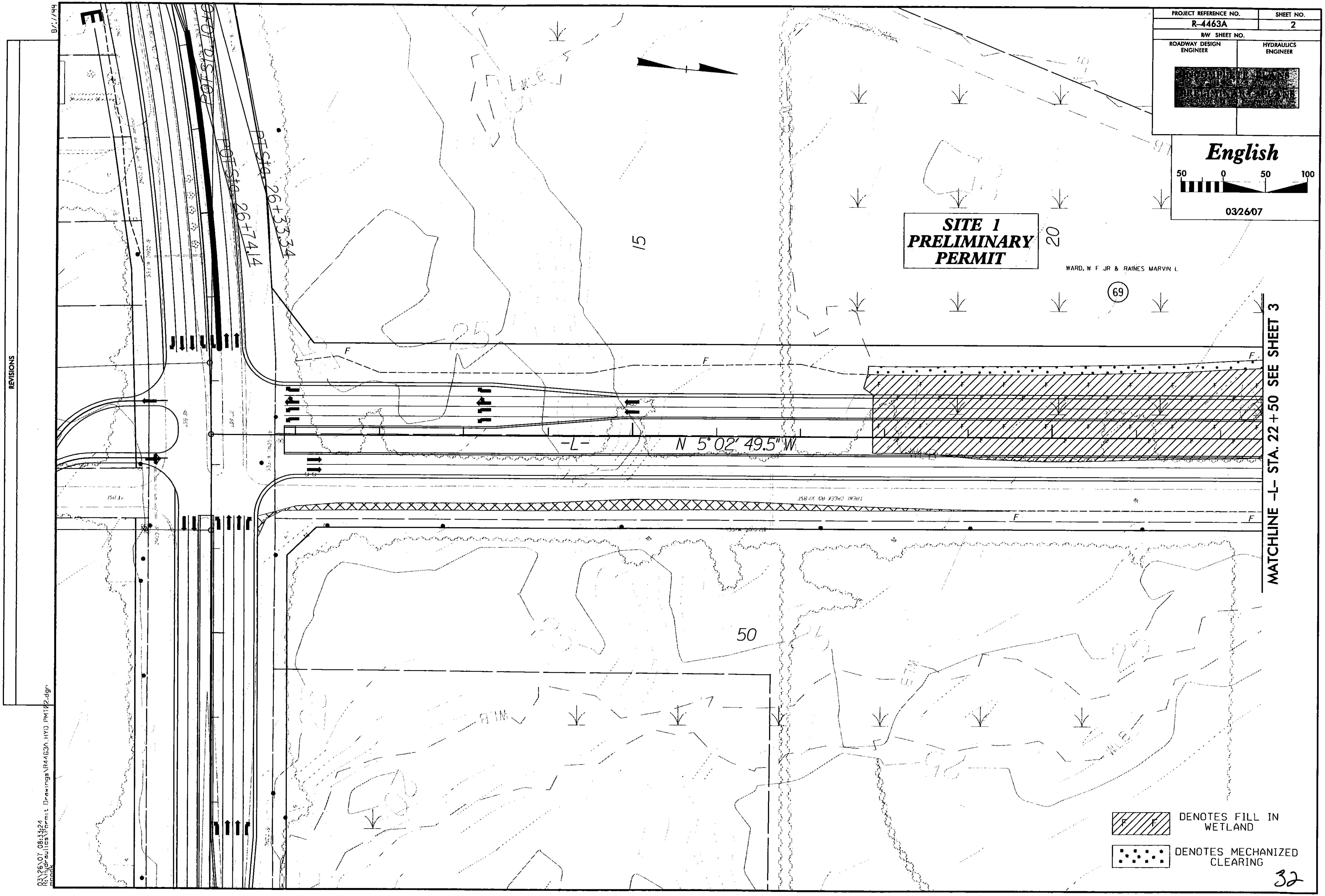
03\26\07 08:57:05
P:\Hydraulics\Permit Drawings\R4463A_HYD_PM102wo.dgn
mcook

PROJECT REFERENCE NO.	SHEET NO.
R-4463A	2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

English

50 0 50 100

03/26/07



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32

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

English

50 0 50 100

03/26/07

REVISIONS

8/11/99

TSSta. 23+39.43

SCSta. 26+19.43

CSSta. 29+16.17

STSta. 31+96.17

25

30

35

SITE 1 PRELIMINARY PERMIT

SITE 2 PRELIMINARY PERMIT

WARD, W F JR & RAINES MARVIN

69

MATCHLINE -L- STA. 22+50 SEE SHEET 2

MATCHLINE -L- STA. 36+00 SEE SHEET 4

-L-

F

WHITE GROVE RD 30' BST

BROOKSHIRE LN 30' BST

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

33

D:\26\07 08585\Permit Drawings\R4463B_HYD_PM1D.dgn
mcgee

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

English

50 0 50 100

03/26/07

REVISIONS

8/7/98

TSSta. 23+39.43

SCSta. 26+19.43

CSSta. 29+16.17

STSta. 31+96.17

25

30

35

SITE 1 PRELIMINARY PERMIT

SITE 2 PRELIMINARY PERMIT

WARD, W F JR & RAINES, MARVIN

69

MATCHLINE -L- STA. 22+50 SEE SHEET 2

MATCHLINE -L- STA. 36+00 SEE SHEET 4

-L-

F

WYATTE GROVE RD 30' BST

BROOKSHIRE LN 30' BST

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

34

03\26\07 08:35:15
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mmark

APPENDIX B

Merger 01 Revised 4A, 4B and 4C Meeting Minutes

Stantec

NC 43 CONNECTOR (TIP NO. R-4463)
NEPA/404 MERGER TEAM
MEETING FOR CONCURRENCE POINT 4A
(TODAY'S DATE: OCTOBER 31, 2005)

Meeting Date: October 13, 2005

Place/Time: NCDOT Board Room, Raleigh
10:30 am

Attendees: Bill Biddlecome, US Army Corps of Engineers [via teleconference]
William Wescott, US Army Corps of Engineers
Chris Militscher, US Environmental Protection Agency
Gary Jordan, US Fish and Wildlife Service
Renee Glenhill-Earley, NC Department of Cultural Resources
Cathy Brittingham, NC Division of Coastal Management
Christina Breen, NC Division of Water Quality
John Hennessy, NC Division of Water Quality
Nikki Thomson, NC Division of Water Quality
Travis Wilson, NC Wildlife Resource Commission
Ed Eatmon, NCDOT Division 2
Jay Johnson, NCDOT Division 2
Chris Padgett, Down East RPO
Bob Deaton, NCDOT Human Environment Unit
Ed Lewis, NCDOT Human Environment Unit
Sonya Stafford, NCDOT Human Resources
Marshall Clawson, NCDOT Hydraulics Unit
Chris Manley, NCDOT Natural Environment Unit
Ray McIntyre, NCDOT Program Development Branch
Stacy Baldwin, NCDOT Project Development & Environmental Analysis Branch
Rob Hanson, NCDOT Project Development & Environmental Analysis Branch
Roy Shelton, NCDOT Project Development & Environmental Analysis Branch
Khaled Al-Akhdar, NCDOT Project Services Unit
Teresa Bruton, NCDOT Project Services Unit
Roger Rochelle, NCDOT Project Services Unit
Parn Schooler, NCDOT Project Services Unit
Mark Staley, NCDOT Roadside Environmental Unit
Allen Raynor, NCDOT Structure Design Unit
Tammye Fontenot, NCDOT Transportation Planning Branch
Michael Avery, City of New Bern
Danny Meadows, City of New Bern
Jim Davis, Craven County Economic Development Commission
Donald Baumgardner, Craven County Planning Department
Paul Koch, Stantec
Amy Sackaroff, Stantec
Dean Sarvis, Stantec

Distribution: Attendees

PURPOSE OF MEETING: To reach agreement on Concurrence Point 4A: Avoidance and Minimization.

Reference: NC 43 Connector Meeting for Concurrence Point 4A

Nikki Thomson noted that indirect and cumulative impact (ICI) analysis requirements related to the issuance of a 401 Water Quality Certification (WQC) would apply for this project. [Given that the ICI Assessment for the NC 43 Connector was finalized in January 2005, DWQ is requesting that an update of the ICI avoidance and minimization measures (i.e., the City's land development plan, ETJ extension, and agreement with proposed access points) be included in the 401 WQC application. **]

In response to a question asked by John Hennessy, Danny Meadows replied that the City of New Bern is not required to apply for a Phase II National Pollutant Discharge Elimination System (NPDES) permit.

The meeting progressed into a discussion of the project's proposed access points. Mr. Koch noted that four access points are included in the project's design: two between US 17 and US 70 and two between US 70 and NC 43/55 (one of these being the intersection at Bosch Boulevard), and that they would be designed as superstreet intersections. In response to a comment made by Mr. Wescott, Mr. Koch stated that the number and proposed access point locations were included in the ICI assessment and were based on design requirements for spacing, existing logging roads, and the extensive wetland delineations conducted for the project. He also noted that the access points are conceptual at this point and that the exact locations have not been specified. Mr. Koch also commented that too many access points would deteriorate traffic flow. In response to a question asked by Mr. Wescott, Mr. Meadows stated that the City agrees to the proposed number of access points. Ms. Thomson noted that this information would need to be included in [the status update of] the ICI assessment.

The signature form for Concurrence Point 4A (attached) was then revised and signed by the NEPA/404 Merger Team.

A brief discussion of the City of New Bern's proposed wildlife habitat conservation area then followed. Michael Avery clarified that the area would be characterized as a passive greenway and that pedestrian passage is currently not planned for the location where the area crosses the NC 43 Connector.

Cathy Brittingham noted that the project would require a consistency determination from the NC Division of Coastal Management.

CORRECTIONS & OMISSIONS: This summary is the writer's interpretation of the events, discussions, and transactions that took place during the meeting. If there are any additions and/or corrections please inform the writer in writing within seven (7) days.

Stantec
Paul R. Koch, PE
Project Manager
pkoch@stantec.com

PRK/acs

NEPA/404 MERGER TEAM MEETING AGREEMENT
Concurrence Point No. 4A: Avoidance and Minimization

PROJECT NO./TIP NO./ NAME/DESCRIPTION:
Federal Aid Project Number:
State Project Number: 6.804857
TIP Project Number: R-4463
TIP Description: NC 43 Connector, Craven County
From NC 55 to US 17

LEAST ENVIRONMENTALLY DAMAGING PRACTICABLE ALTERNATIVE (LEDPA):

From the northern terminus at NC 43 west of Bosch Boulevard (the original northern terminus), Alternative F turns southwest to a proposed grade separation over the NCRR tracks. Approximately one mile south of the railroad, an interchange is proposed with US 70. The interchange is located west of the Greenbrier community and parallels an existing powerline easement. South of US 70, Alternative F continues to parallel the powerline easement before curving to the east. The southern portion of this alternative joins existing Trent Creek Road and terminates at US 17.

AVOIDANCE AND MINIMIZATION:

The following avoidance and minimization measures are incorporated into the preliminary design of Alternative F (shown on the 09/01/05 preliminary design mapping for Alternative F presented at the October 13, 2005 merger meeting):

- Alignment was developed to minimize the conversion of undeveloped land by paralleling property lines and existing development where feasible;
- Wetland impacts were minimized by adjusting alignment and slopes;
- Relocations were minimized by adjusting alignment and slopes;
- Impacts to the powerline near the US 70 interchange were minimized; and,
- A noise wall is proposed in the vicinity of the Trent Creek subdivision.

As agreed upon at the meetings for Concurrence Point 2A, no bridges are recommended by the NEPA/404 Merger Team. Wildlife crossing(s) are recommended south of US 70, as shown in ICI Exhibit 4.1.1. The exact locations and sizing of wildlife crossings will be addressed during the final design phase following selection of a Preferred Alternative. Animal passage design will be subject to approval by the NC Wildlife Resources Commission and the US Fish and Wildlife Service.

The Project Team has concurred on this date of October 13, 2005 on the avoidance and minimization measures for the Least Environmentally Damaging Practicable Alternative (LEDPA) for TIP Project No. R-4463.

NC 43 CONNECTOR (TIP NO. R-4463B)
NEPA/404 MERGER TEAM
MEETING FOR CONCURRENCE POINT 4B
(Today's Date: January 25, 2007)

Meeting Date: January 18, 2007

Place/Time: NCDOT Board Room, 1:00 pm

Attendees:
William Wescott-USACE
David Wainwright-NCDWQ
Travis Wilson-NCWRC
Gary Jordan-USFWS
Kathy Matthews-USEPA
Steve Sollod-DCM
Stephen Lane-DCM
Sarah McBride-SHPO (not present)
Virginia Mabry-NCDOT, Alternative Delivery Unit
Rodger Rochelle, NCDOT, Alternative Delivery Unit
Anne Gamber, NCDOT, Alternative Delivery Unit
John Wadsworth, NCDOT, Alternative Delivery Unit
Keith Eason, NCDOT, Roadway Design Unit
Chris Manley, NCDOT, NEU
Chris Riverbark, NCDOT, NEU
Elizabeth Lusk, NCDOT, NEU
Deborah Anderson, NCDOT, NEU
Cherri Smith, NCDOT, NEU
Rob Hanson, NCDOT, PDEA
Mark Staley, NCDOT, REU
Bob Deaton, NCDOT, HEU
Stephen Worthy, NCDOT, Utilities
Ed Eatmon, NCDOT, Division 2
Daniel Van Liere, Down East RPO Coordinator, ECCOG
Amy Simes, NCDENR
Paul Koch, Stantec
Tina Swiezy, RK&K
Matthew Cook, RK&K
Mike Merritt, RK&K
Howard Woodall, RK&K
Joanna Harrington, RK&K
Jonathan Bivens, S.T. Wooten Corp.
Jon Wallace, S.T. Wooten Corp.
Michael Wood, Catena Group
Jennifer Logan, Catena Group

Distribution: Attendees

Sheet 10-11:

The wetland site at –L- Sta. 225+00 to 231+00 was pointed out. The wetland impacts for this site are 1.848 Ac. for Permanent Fill in Wetlands and 0.122 Ac. for Mechanized Clearing in Wetlands. The wetland south of the alignment will be considered a total take (there is only a very small portion of wetland that is outside the fill slopes, therefore it would lose its wetland characteristics), however the wetland north of the alignment is not considered a total take. There were no other comments or questions.

Note:

The proposed drainage for sheets 11-12, 16-17 was left off the plans provided to the agencies due to that fact that on half size sheets it is difficult to read. At this time, Anne Gamber with NCDOT pointed out to those in attendance the 2 full size sets of redlines on the conference table that included proposed drainage design on these sheets. Mr. Cook stated that due to the flat undersized nature of the existing storm drainage system, the main trunkline would need to be replaced in its current location. The pipe slope would be steepened and pipe sizes increased as the design criteria dictates. The replacement would continue to the reinforced concrete box culvert on sheet 18.

Sheet 12:

No wetlands or jurisdictional streams are on this sheet.

David Wainwright with DWQ asked about the nature of the existing retention pond at -L- Sta. 246+50 as it relates to the new design. Mr. Cook pointed out that the retention pond would be drained and filled. The pond will no longer be needed since it is serving the existing gas station which will be removed because of the location of the new alignment.

Mr. Wainwright also questioned the direction of the riprap at the end of the pipe at –L- Sta. 245+75 RT. The riprap as shown is at a 90 degree angle to the pipe outlet. Mr. Cook stated that this was done to show the direction of the water as it leaves the pipe. The riprap pad at the end of the pipe will be installed in a manner to dissipate the energy and velocity of the flow.

Sheet 15:

No wetlands or jurisdictional streams are on this sheet. There were no comments or questions.

This concluded the discussion of the hydraulic design. Mr. Bivens then introduced Howard Woodall with RK&K. Mr. Woodall is the engineer responsible for coordinating the proposed utility relocations for the project.

Mr. Woodall discussed the following utility impacts associated with the project:

Sheet 4

There is a power line that runs perpendicular to US 70 (-Y3-). However, due to the proposed alignment of –LPC- and –RPC-, the power lines will not have to be relocated. The power lines will only need to be elevated by raising the poles. There are no anticipated impacts or conflicts on this sheet.

Sheets 5-6, 13-14

No utility associated impacts or conflicts.

Sheets 7-8

There are two power lines that cross the proposed alignment at –L- Sta. 187+00 and –L- Sta. 193+00. The proposed fill height at this location is approximately 40' above the existing ground due to the proposed bridges over the existing railroad. It is not feasible to cross the proposed roadway with the power lines at this location due to this difference in elevation. Mr. Woodall is working with the utility companies to develop a plan to move the utility crossings to a more suitable site for crossing with minimal impacts to the wetlands in the area. There are no jurisdictional streams in the area. The waterline that runs along the railroad will not be affected.

Sheet 9

There is a power line that crosses the proposed alignment at –L- Sta. 214+00. The proposed roadway fill is low enough in this area for the poles to be raised which will allow the power line to use existing easement.

Sheet 10

No utility associated impacts or conflicts.

Sheets 11-12, 16-18

There are utility conflicts on these sheets due to proposed improvements along existing NC 55; however, there are no jurisdictional streams or wetlands that will be impacted.

NC 43 CONNECTOR (TIP NO. R-4463B)
NEPA/404 MERGER TEAM
MEETING FOR CONCURRENCE POINT 4C
DRAFT
(Today's Date: April 11, 2007)

Meeting Date: April 11, 2007

Place/Time: NCDOT Hydraulics Conference Room, 2:00 pm

Attendees:
William Wescott-USACE
David Wainwright-NCDWQ
Travis Wilson-NCWRC
Gary Jordan-USFWS
Kathy Matthews-USEPA
Chris Militscher, USEPA
Steve Sollod-DCM
Stephen Lane-DCM
Virginia Mabry-NCDOT, Alternative Delivery Unit
John Wadsworth, NCDOT, Alternative Delivery Unit
Chris Manley, NCDOT, NEU
Chris Riverbark, NCDOT, NEU
Elizabeth Lusk, NCDOT, NEU
Mark Staley, NCDOT, REU
Mark Laugisch, NCDOT, REU
Frank Bowen, NCDOT, Utilities
Johnny Metcalfe, NCDOT, Division 2
Tina Swiezy, RK&K
Matthew Cook, RK&K
Mike Merritt, RK&K
Howard Woodall, RK&K
Joanna Harrington, RK&K
Jonathan Bivens, S.T. Wooten Corp.
Michael Alford, S.T. Wooten Corp.
Rob Coleman, S.T. Wooten Corp.
Michael Wood, Catena Group
Jennifer Logan, Catena Group
Stacy Oberhausen, NCDOT, PDEA
Donnie Brew, FHWA

Distribution: Attendees

Purpose of Meeting: To reach agreement on Concurrence Point 4C – 100% Hydraulic Review

Section B

Sheet 7/Site 1:

The wetland impacts for this site are 0.28 acre of Permanent Fill in Wetlands and 0.02 acre of Mechanized Clearing in Wetlands. Donnie Brew with FHWA asked why there was a guardrail at this site. Mr. Cook's response was that due to the roadway fill height guardrail is required. There were no other comments or questions.

Sheet 8/Site 2:

The wetland impacts for this site are 0.000 acre for Permanent Fill in Wetlands (1.3 sq. ft. is less than the significant digits allowed for the acreage conversion) and 0.005 acre for Mechanized Clearing in Wetlands. There were no other comments or questions.

Sheet 10-11/Site 3:

The wetland impacts for this site are 1.89 acre of Permanent Fill in Wetlands and 0.09 acre of Mechanized Clearing in Wetlands. The wetland east of the alignment will be considered a total take (there is only a very small portion of wetland that is outside the fill slopes, therefore it would lose its wetland characteristics), however the wetland west of the alignment is not considered a total take. The only impact to the wetland is from roadway fill, not due to the cross pipes. There were no other comments or questions.

Sheet 16/Site 4:

The outlet ditch on the far north side of the pond has been blocked increasing the size of the pond and is backing up water onto the upstream properties. Chris Manley with NCDOT passed around photos of the site. It was agreed at the Concurrence Point 4B meeting that this site would need to be reevaluated by the agencies as a possible wetland.

This wetland site was delineated by Mr. Manley on March 28, 2007 and had not yet been verified as jurisdictional before the 4C meeting. This site was also reviewed in the field by Mr. Wescott of USACE on April 10, 2007. Mr. Wescott approved the delineation at the 4C meeting; therefore impacts calculated from Mr. Manley's delineation will be used for the permit application.

This concluded the discussion of the hydraulic design. Mr. Cook then introduced Howard Woodall with RK&K. Mr. Woodall is the engineer responsible for coordinating the proposed utility relocations for the project.

Mr. Woodall discussed utility impacts associated with the project. In the vicinity of the railroad, all utilities will be relocated without impacting natural resources. In the vicinity of NC 55, the only utilities that will impact natural resources will be an overhead power line on the north side of NC 55 (Site 4). The overhead relocation will span the wetland and will be conducted under existing Nationwide Permit 12.

APPENDIX C

Stormwater Management Plan

STORMWATER MANAGEMENT PLAN

Project: 35601.3.2, R-4463B February 23, 2007
Craven County
Hydraulics Project Engineer: Matthew L. Cook P.E. (RKK Engineers)
Anne Gamber, P.E. (NCDOT Alternative Delivery Unit)

ROADWAY DESCRIPTION

The project consists of a new alignment for NC43 Connector in Craven County. This section runs from US70 to NC43/NC55 (Neuse Boulevard). The overall length of the project is approximately 2.4 mi. of four lane divided highway. The project will be controlled access for the mainline (NC43 Connector), and standard Right of Way for the rest of the project. Proposed typical sections for the mainline consist of a grassed median with open shoulders and ditches. Sections of the mainline will include a raised median with curb & gutter. There are no waterway bridge or box culvert crossings on the proposed alignment. There are no proposed pipe culverts greater than 48" on this project. The project drainage system consists of cross pipes, grated inlets and associated pipe systems, and side, median and lateral stormwater ditches and swales.

ENVIRONMENTAL DESCRIPTION

The project is located in the Neuse River Basin. Therefore, it is subject to North Carolina Department of Environment and Natural Resources (NCDENR) rules and regulations concerning stream buffers and filtration. However, there are no jurisdictional streams within the project limits. There are three general areas where wetland sites cross back and forth or run parallel to the alignments that will be impacted by the proposed project. Wetland impacts will be kept to a minimum by limiting widening of the roadway in these areas. The project is also in a CAMA county, Coastal Area Management Act, and will adhere to all requirements and permitting set forth by this Act.

BEST MANAGEMENT PRACTICES AND MAJOR STRUCTURES

The primary goal of Best Management Practices (BMPs) is to prevent degradation of the state's surface waters by the location, construction and operation of the highway system. BMPs are activities, practices and procedures taken to prevent or reduce stormwater pollution. The BMPs and measures that are used on this project to reduce stormwater impacts are grassed swales and grassed fill slopes. These measures are used for filtration of stormwater before it leaves the site. There are no jurisdictional streams within the project limits. There will be no ditching within the wetland areas. There are no major drainage structures on this project.

The following is a listing of the grass swales on the project with the corresponding information for each one.

STATION	OUTLET	LENGTH (ft)	SLOPE (%)	DESC	V 10yr (ft/s)	AREA (ac)	Q 10yr (cfs)
-L- 192+65-194+05 RT	382	140	2.78	3:1, V DITCH	2.61	0.52	1.29
-Y8- 21+00-25+00 LT	OUTLET DITCH	400	0.28	3.5:1, V DITCH	0.97	0.28	1.04
-Y8- 21+00-25+00 RT	OUTLET DITCH	400	0.22	3.5:1, V DITCH	1.04	0.63	1.95
-L- 246+00-248+00 LT	510 (LT)	200	0.30	3:1, V DITCH	1.74	1.22	3.05
-L- 248+00-249+67 LT	510 (RT)	167	1.19	3.5:1, V DITCH	2.25	1.11	3.38
-L- 247+00-253+00 RT	OUTLET DITCH	600	0.05	3:1, 3' BASE DITCH	1.00	7.91	14.54
-Y5- 15+07-17+62 LT	OUTLET DITCH	255	0.52	4.5:1, V DITCH	2.03	4.49	8.26
-Y5- 15+16-17+62 RT	458 (LT)	488	0.26	4.5:1, V DITCH	1.37	1.77	4.93
-Y5- 17+62-22+50 LT	OUTLET DITCH	246	0.51	4.5:1, V DITCH	1.35	1.06	2.50
-Y5- 17+62-22+50 RT	458 (RT)	488	0.22	4.5:1, V DITCH	1.03	1.07	2.98
-Y6- 10+50-11+25 RT	OUTLET DITCH	75	1.50	3.5:1, V DITCH	1.23	0.11	0.31
-Y6- 11+00-12+00 LT	OUTLET DITCH	100	0.30	3.5:1, V DITCH	0.93	0.21	0.78
-L- 190+40 RT	OUTLET DITCH	45	0.22	3:1, V DITCH	0.50	0.05	0.11
-L- 190+46-190+77 RT	OUTLET DITCH	100	0.10	3:1, V DITCH	0.45	0.07	0.17
-L- 190+38-19075 LT	OUTLET DITCH	140	3.19	3:1, V DITCH	2.00	0.21	0.52

APPENDIX D

Ecosystem Enhancement Program
Request & Acceptance Letters

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

January 10, 2006

Mr. William D. Gilmore, P.E.
EEP Transition Manager
Ecosystem Enhancement Program
1652 Mail Service Center
Raleigh, NC 27699-1652

Dear Sir:

Subject: Craven County. NC 43 Connector (Bosch Blvd.). Extension of NC 43 from NC 55 to US 17 just west of New Bern. State Project No 6.804857, WBS: 35601.1.1, TIP Nos. R-4463.

The purpose of this letter is to request that the North Carolina Ecosystem Enhancement Program (EEP) provide confirmation that you are willing to provide compensatory mitigation for the project in accordance with the Memorandum of Agreement (MOA) signed July 22, 2003 by the USACE, the NCDENR and the NCDOT.

The North Carolina Department of Transportation proposes to construct an extension of NC 43 from NC 55 to US 17 just west of New Bern in Craven County, known as the NC 43 Connector or Bosch Boulevard.

RESOURCES UNDER THE JURISDICTION OF SECTION 404 AND 401 OF THE CLEAN WATER ACT.

We have avoided and minimized the impacts to jurisdictional resources to the greatest extent possible. The remaining impacts to jurisdictional resources will be compensated for by mitigation provided by the EEP program. We estimate that 3.95 acres of wetlands will be impacted.

The project is located in the Coastal Plain Physiographic Province in Craven County in the Neuse River basin in Hydrological Cataloguing Unit 03020204.

The wetland impacts total 3.95 acres of nonriverine hardwood and swamp forests. We propose to provide compensatory mitigation for the wetland impacts by using the EEP for the 3.95 acres of impacts.

Please send the letter of confirmation to William Wescott at U. S. Army Corps of Engineers Washington Regulatory Field Office, P.O. Box 1000 Washington, NC 27889-1000. Mr. Wescott's FAX number is (252) 975-1399. The current let date for the project is 05/16/06 for which the let review date is 03/28/06.

In order to satisfy regulatory assurances that mitigation will be performed; the NCDWQ requires a formal letter from EEP indicating their willingness and ability to provide the mitigation work requested by NCDOT. The NCDOT also requests a copy of the confirmation letter be sent to Mr. John Hennessy of NCDWQ.

Please respond to NCDOT in writing within 10 business days with an EEP acceptance letter for this NCDOT project. If you have any questions or need additional information please call Chris Manley @ (919) 715-1487 or cdmanley@dot.state.nc.us .

Sincerely,

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

Mr. John Hennessy, NCDWQ
Ms. Nicole Thompson, NCDWQ
Mr. William Wescott, USACE
Ms. Cathy Brittingham, NCDCM
Mr. Bill Arrington, NCDCM
Ms. Linda Fitzpatrick, NCDOT Natural Environment Unit
Mr. Majed Alghandour, P. E., NCDOT Project Management/Scheduling Unit
Mr. Todd Jones, NCDOT External Audit Branch
File-R-4463

Ecosystem Enhancement PROGRAM

January 31, 2006

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 compensatory non-riverine wetland mitigation for the subject project. Based on the information supplied by you in a letter dated January 10, 2006, the impacts are located in CU 03020204 of the Neuse River Basin in the Northern Outer Coastal Plain (NICP) Eco-Region, and are as follows:

Non-Riverine Wetlands: 3.95 acres

The subject project is <u>not</u> listed in Exhibit 2 of the Memorandum of Agreement among the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, Wilmington District dated July 22, 2003. Mitigation for this project will be provided in accordance with the above referenced agreement. EEP will commit to implementing sufficient compensatory non-riverine 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 Tri-Party MOA.

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. John Hennessy, Division of Water Quality, Wetlands/401 Unit
File: R-4463

Ecosystem Enhancement PROGRAM

January 31, 2006

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-riverine wetland mitigation for the unavoidable impact associated with the above referenced project. As indicated in the NCDOT's mitigation request letter dated January 10, 2006, the project will impact 3.95 acres of non-riverine wetlands.

EEP will commit to implementing sufficient compensatory non-riverine wetland mitigation up to a 2:1 ratio to offset the impacts associated with this project by the end of the MOA year in which the permit for this project is issued, in accordance with Section X of the Memorandum of Agreement between the U. S. Army Corps of Engineers, N. C. Department of Environment and Natural Resources, and N. C. Department of Transportation (Tri-Party MOA), signed on July 22, 2003. Compensatory riverine wetland mitigation assets available include, but are not limited to, the Croatan Mitigation Bank and Stallings Mitigation site.

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

Sincerely,

William D. Gilmore, P.E.
EEP Director

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

Ecosystem Enhancement PROGRAM

May 21, 2007

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 May 15, 2007, the project will impact 4.42 acres of non-riparian wetlands.

This mitigation acceptance letter replaces the mitigation acceptance letter issued on January 31, 2006. 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 8.84 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. Stanfield Sr

William D. Gilmore, P.E.
EEP Director

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

Ecosystem Enhancement PROGRAM

May 21, 2007

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 May 15, 2007, 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: 4.42 acres

This mitigation acceptance letter replaces the mitigation acceptance letter dated January 31, 2006. 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 Jr

William D. Gilmore, P.E.
EEP Director

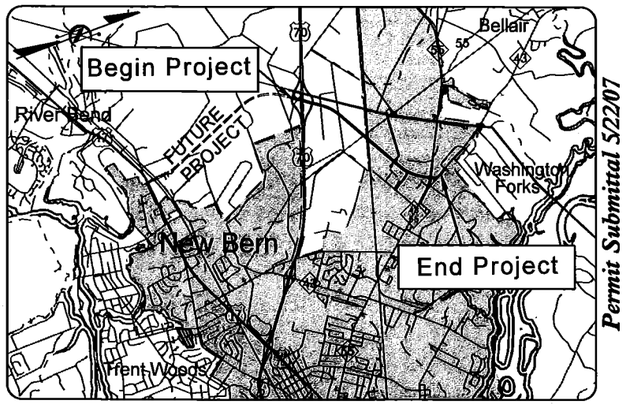
cc: Mr. William Wescott, USACE-Washington
Mr. John Hennessy, Division of Water Quality, Wetlands/401 Unit
File: R-4463 Revised

APPENDIX E

Half size Roadway Plans

PROJECT: C201279 T.I.P. PROJECT R-4463B

SEE SHEET I-A FOR INDEX OF SHEETS
SEE SHEET I-B FOR CONVENTIONAL SYMBOLS



VICINITY MAP

Permit Submittal 522207

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CRAVEN COUNTY

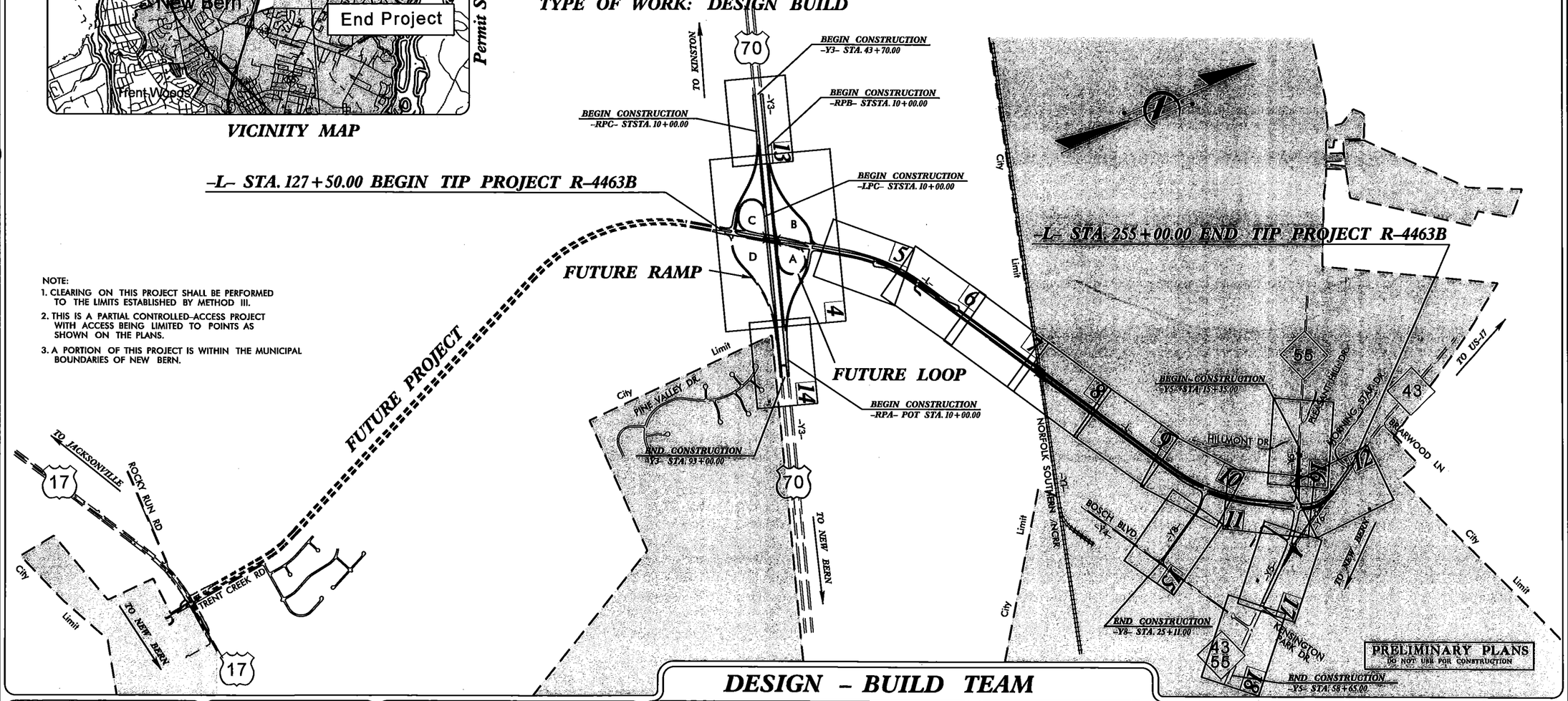
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-4463B	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
35601.3.2		

LOCATION: NC 43 CONNECTOR FROM US 70 TO NC 43/NC 55

TYPE OF WORK: DESIGN BUILD

NOTE:
1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
2. THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.
3. A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF NEW BERN.



DESIGN - BUILD TEAM

GRAPHIC SCALES

PLANS: 50 0 50 100

PROFILE (HORIZONTAL): 50 0 50 100

PROFILE (VERTICAL): 5 0 5 10

DESIGN DATA

ADT 2007	=	11,160
ADT 2027	=	18,760
DHV	=	9 %
D	=	60 %
T	=	5 % *
V	=	60 mph
CLASS	=	RURAL ARTERIAL

*(TTST = 2%, DUAL= 3 %)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-4463B.....	2.35 mi
LENGTH STRUCTURE TIP PROJECT R-4463B.....	0.06 mi
TOTAL LENGTH TIP PROJECT R-4463B.....	2.41 mi

PLANS PREPARED BY :
RUMMEL, KLEPPER & KAHL, LLP
consulting engineers
900 RIDGEFIELD DRIVE, SUITE 350
RALEIGH, NORTH CAROLINA 27609
FOR
DIVISION OF HIGHWAYS

2002 STANDARD SPECIFICATIONS

LETTING DATE:
OCTOBER 12TH, 2006

J. T. Peacock, Jr., P.E.
PROJECT ENGINEER

Michael T. Merritt, P.E.
PROJECT DESIGN ENGINEER

CONTRACTOR :
S. T. Wooten Corporation
S.T.WOOTEN CORPORATION
P.O.BOX 2408
3801 BLACK CREEK ROAD
WILSON, NORTH CAROLINA 27894

HYDRAULICS ENGINEER
SIGNATURE: P.E.
ROADWAY DESIGN ENGINEER

P.E.
STATE DESIGN ENGINEER

P.E.
SIGNATURE:

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

05/21/07 10:54:50
R:\Roadway\Proj\R4463B rdy_ssh.dgn
dsmoore

3/15/06

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	1-B

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 — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

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

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — 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 — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Utility Easement — PUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- Proposed Wheel Chair Ramp Curb Cut — WCC
- Curb Cut for Future Wheel Chair Ramp — CCFR
- 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 — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

- Sanitary Sewer Manhole — S
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

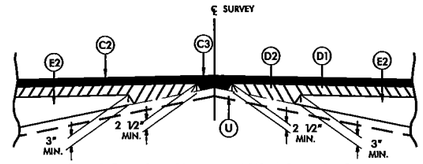
MISCELLANEOUS:

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

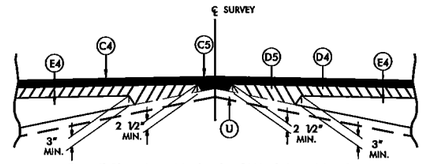
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PAVEMENT SCHEDULE					
C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.	D3	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.	J2	PROP. 6" AGGREGATE BASE COURSE.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	D4	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	P1	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2 " IN DEPTH.	D5	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.	R1	1'-6" CONCRETE CURB AND GUTTER.
C4	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R2	2'-6" CONCRETE CURB AND GUTTER.
C5	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2 " IN DEPTH.	E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.	R3	SHOULDER BERM GUTTER
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	E3	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	T	EARTH MATERIAL.
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	J1	PROP. 8" AGGREGATE BASE COURSE.	U	EXISTING PAVEMENT.
		E4	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.	W	WEDGING

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

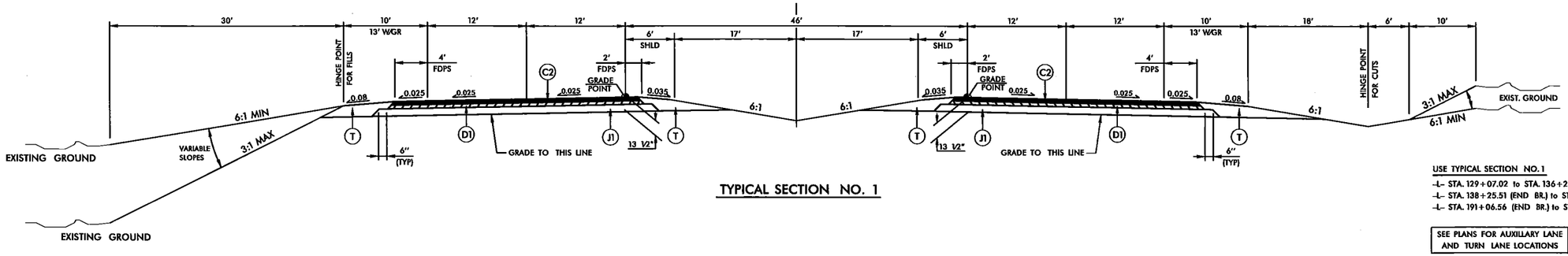


Detail Showing Method of Wedging No. 1



Detail Showing Method of Wedging No. 2

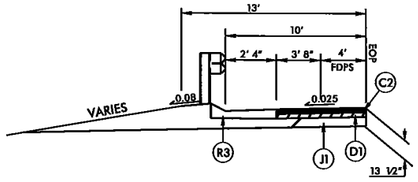
℄ –L– (NC 43 CONNECTOR)



TYPICAL SECTION NO. 1

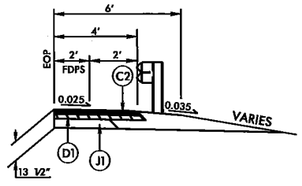
USE TYPICAL SECTION NO. 1
–L– STA. 129+07.02 to STA. 136+22.93 (BEG. BR.)
–L– STA. 138+25.51 (END BR.) to STA. 189+78.90 (BEG. BR.)
–L– STA. 191+06.56 (END BR.) to STA. 235+69.31

SEE PLANS FOR AUXILLARY LANE AND TURN LANE LOCATIONS



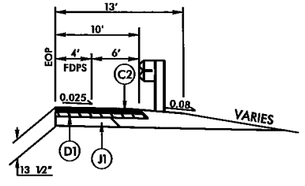
TYPICAL SECTION NO. 1A

USE TYPICAL SECTION NO. 1A IN CONJUNCTION WITH TYPICAL NO. 1 AT THE FOLLOWING LOCATIONS:
–L– STA. 132+90.02 to STA. 136+13.08 (RT.)
–L– STA. 135+12.98 to STA. 135+81.03 (LT.)
–L– STA. 138+32.56 to STA. 142+09.98 (LT.)
–L– STA. 138+64.61 to STA. 139+25.02 (RT.)
–L– STA. 179+83.44 to STA. 189+01.14 (LT.)
–L– STA. 179+83.44 to STA. 190+09.35 (RT.)
–L– STA. 190+76.11 to STA. 202+00.06 (LT.)
–L– STA. 191+81.87 to STA. 202+03.50 (RT.)



TYPICAL SECTION NO. 1B

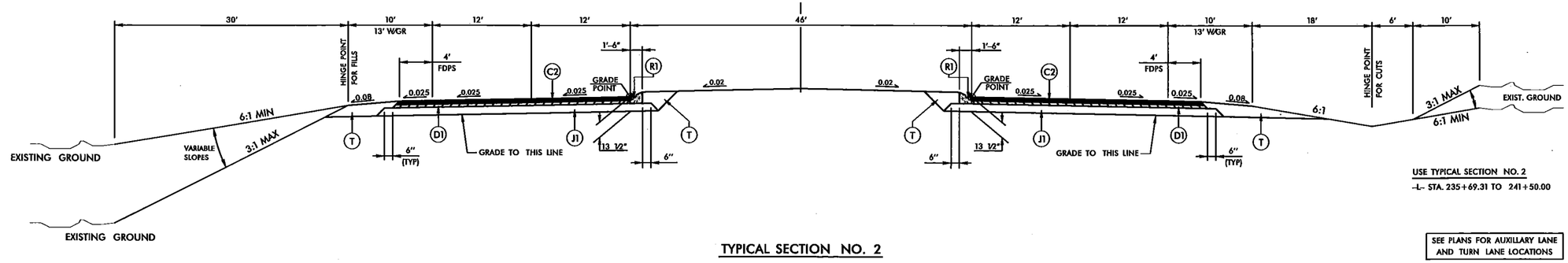
USE TYPICAL SECTION NO. 1B IN CONJUNCTION WITH TYPICAL NO. 1 AT THE FOLLOWING MEDIAN LOCATIONS:
–L– STA. 133+84.00 to STA. 135+93.00 (LT.)
–L– STA. 138+55.00 to STA. 140+50.00 (RT.)
–L– STA. 187+52.00 to STA. 189+01.14 (LT.)
–L– STA. 191+49.00 to STA. 193+33.00 (RT.)



TYPICAL SECTION NO. 1C

USE TYPICAL SECTION NO. 1C IN CONJUNCTION WITH TYPICAL NO. 1 AT THE FOLLOWING LOCATIONS:
–L– STA. 131+00.00 to STA. 132+90.02 (RT.)
–L– STA. 134+00.00 to STA. 135+12.98 (LT.)
–L– STA. 139+25.02 to STA. 140+28.00 (RT.)
–L– STA. 142+09.98 to STA. 143+47.00 (LT.)
–L– STA. 178+80.00 to STA. 179+83.44 (RT.)
–L– STA. 179+28.00 to STA. 179+83.44 (LT.)
–L– STA. 202+00.06 to STA. 203+03.00 (LT.)
–L– STA. 202+03.50 to STA. 202+52.00 (RT.)

℄ –L– (NC 43 CONNECTOR)



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
–L– STA. 235+69.31 TO 241+50.00

SEE PLANS FOR AUXILLARY LANE AND TURN LANE LOCATIONS

REVISIONS

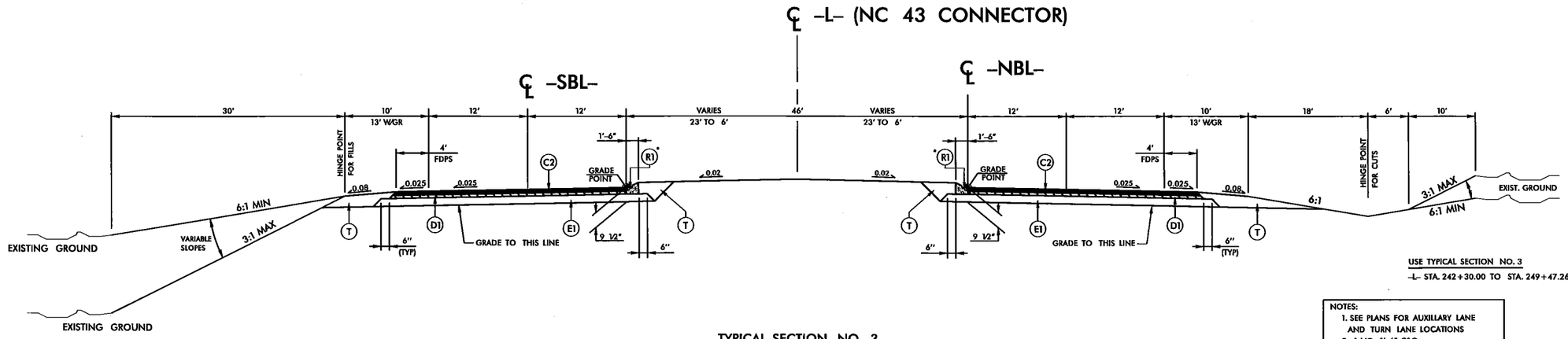
05/21/07 10:55:53
C:\Projects\proj\R4463B_rdy_typ.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	2-A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

[redacted]

PAVEMENT SCHEDULE							
C1	PROP. APPROX. 2" TYPE S9.5B	D3	PROP. VAR. DEPTH TYPE I19.0B	J1	PROP. 8" AGGREGATE BASE COURSE.	U	EXISTING PAVEMENT.
C2	PROP. APPROX. 3" TYPE S9.5B	D4	PROP. APPROX. 4" TYPE I19.0C	J2	PROP. 6" AGGREGATE BASE COURSE.	W	WEDGING
C3	PROP. VAR. DEPTH TYPE S9.5B	D5	PROP. VAR. DEPTH TYPE I19.0C	P1	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.		
C4	PROP. APPROX. 3" TYPE S9.5C	E1	PROP. APPROX. 4" TYPE B25.0B	R1	1'-6" CONCRETE CURB AND GUTTER.		
C5	PROP. VAR. DEPTH TYPE S9.5C	E2	PROP. VAR. DEPTH TYPE B25.0B	R2	2'-6" CONCRETE CURB AND GUTTER.		
D1	PROP. APPROX. 2½" TYPE I19.0B	E3	PROP. APPROX. 4" TYPE B25.0C	R3	SHOULDER BERM GUTTER		
D2	PROP. APPROX. 3" TYPE I19.0B	E4	PROP. VAR. DEPTH TYPE B25.0C	T	EARTH MATERIAL.		

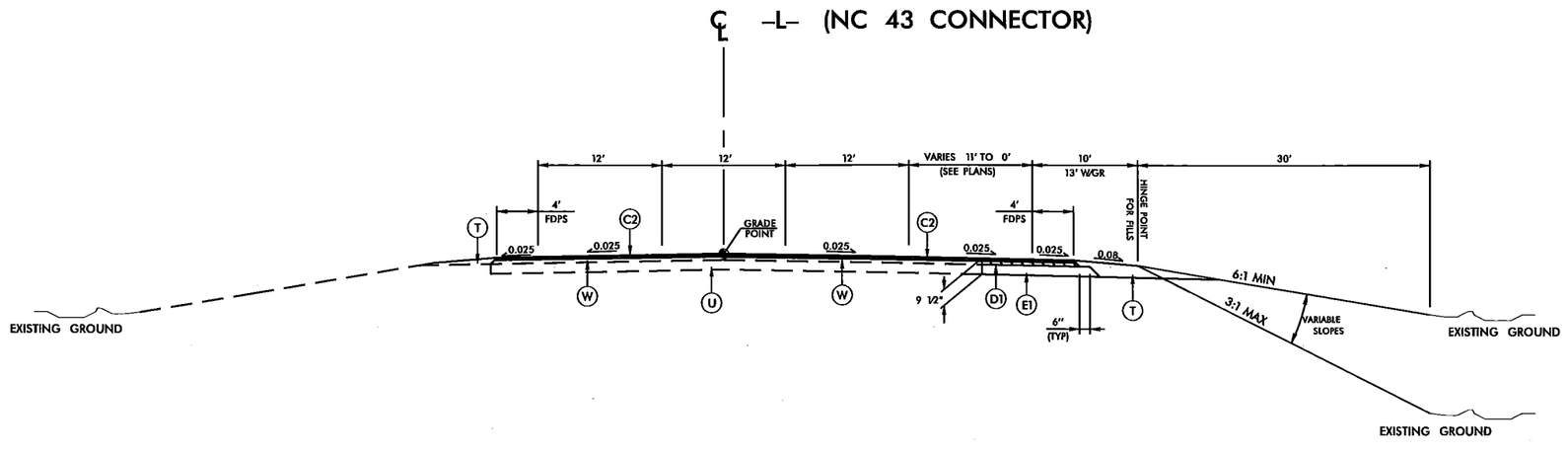
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
–L– STA. 242+30.00 TO STA. 249+47.26

NOTES:
1. SEE PLANS FOR AUXILLARY LANE AND TURN LANE LOCATIONS
2. * NO 1'-6" C&G
   –L– STA. 248+10 TO STA. 249+47.26
3. SEE PLANS FOR 600' LANE DROP



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4
–L– STA. 249+47.26 TO STA. 255+00.00

SEE PLANS FOR 600' LANE DROP

REVISIONS

05\21\07 11:21:09
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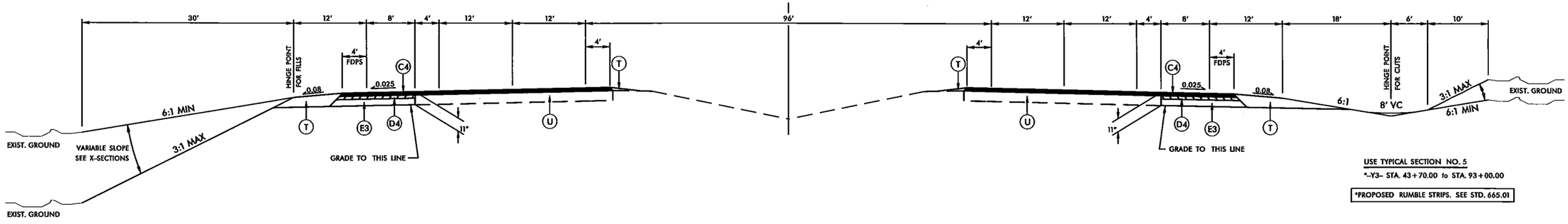
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	2-B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PAVEMENT SCHEDULE							
C1	PROP. APPROX. 2" TYPE S9.5B	D3	PROP. VAR. DEPTH TYPE I19.0B	J1	PROP. 8" AGGREGATE BASE COURSE.	U	EXISTING PAVEMENT.
C2	PROP. APPROX. 3" TYPE S9.5B	D4	PROP. APPROX. 4" TYPE I19.0C	J2	PROP. 6" AGGREGATE BASE COURSE.	W	WEDGING
C3	PROP. VAR. DEPTH TYPE S9.5B	D5	PROP. VAR. DEPTH TYPE I19.0C	P1	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.		
C4	PROP. APPROX. 3" TYPE S9.5C	E1	PROP. APPROX. 4" TYPE B25.0B	R1	1'-6" CONCRETE CURB AND GUTTER.		
C5	PROP. VAR. DEPTH TYPE S9.5C	E2	PROP. VAR. DEPTH TYPE B25.0B	R2	2'-6" CONCRETE CURB AND GUTTER.		
D1	PROP. APPROX. 2½" TYPE I19.0B	E3	PROP. APPROX. 4" TYPE B25.0C	R3	SHOULDER BERM GUTTER		
D2	PROP. APPROX. 3" TYPE I19.0B	E4	PROP. VAR. DEPTH TYPE B25.0C	T	EARTH MATERIAL.		

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

℄ -Y3- (US 70)



USE TYPICAL SECTION NO. 5

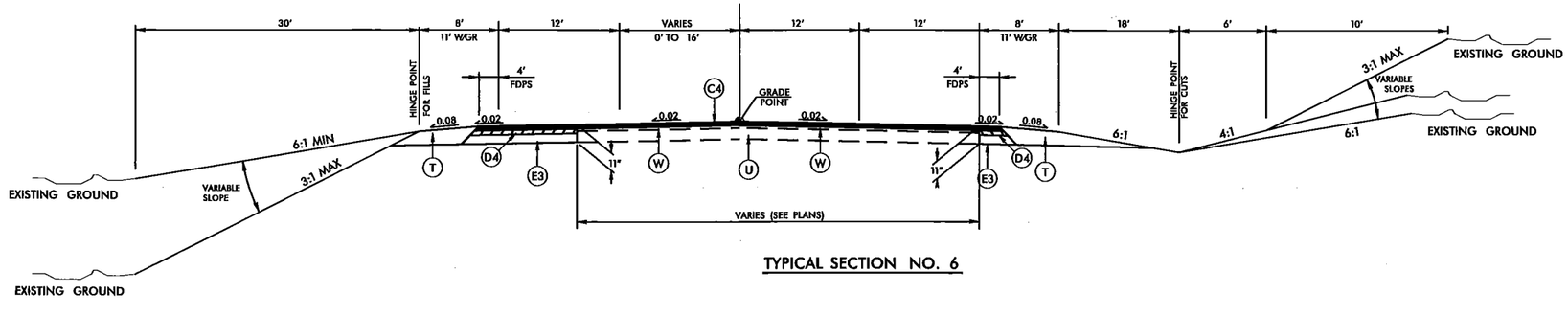
*-Y3- STA. 43+70.00 to STA. 93+00.00

*PROPOSED RUMBLE STRIPS. SEE STD. 665.01

TYPICAL SECTION NO. 5

RESURFACING ONLY (NO WIDENING) AT THE FOLLOWING LOCATIONS:
-Y3- STA. 56+67.20 TO STA. 84+42.95 (LT)
-Y3- STA. 53+66.13 TO STA. 63+06.24 (RT)

℄ -Y5- (NC 55)



TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6

-Y5- STA. 15+35.00 to STA. 23+35.00

SEE PLANS FOR TURN LANES, TAPER LOCATIONS, & ISLANDS

REVISIONS

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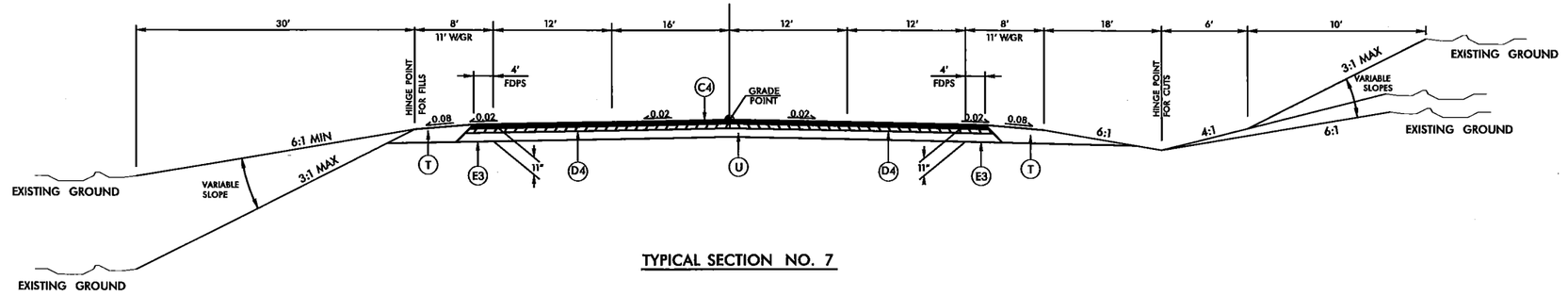
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	2-C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

[redacted]

PAVEMENT SCHEDULE							
C1	PROP. APPROX. 2" TYPE S9.5B	D3	PROP. VAR. DEPTH TYPE I19.0B	J1	PROP. 8" AGGREGATE BASE COURSE.	U	EXISTING PAVEMENT.
C2	PROP. APPROX. 3" TYPE S9.5B	D4	PROP. APPROX. 4" TYPE I19.0C	J2	PROP. 6" AGGREGATE BASE COURSE.	W	WEDGING
C3	PROP. VAR. DEPTH TYPE S9.5B	D5	PROP. VAR. DEPTH TYPE I19.0C	P1	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.		
C4	PROP. APPROX. 3" TYPE S9.5C	E1	PROP. APPROX. 4" TYPE B25.0B	R1	1'-6" CONCRETE CURB AND GUTTER.		
C5	PROP. VAR. DEPTH TYPE S9.5C	E2	PROP. VAR. DEPTH TYPE B25.0B	R2	2'-6" CONCRETE CURB AND GUTTER.		
D1	PROP. APPROX. 2½" TYPE I19.0B	E3	PROP. APPROX. 4" TYPE B25.0C	R3	SHOULDER BERM GUTTER		
D2	PROP. APPROX. 3" TYPE I19.0B	E4	PROP. VAR. DEPTH TYPE B25.0C	T	EARTH MATERIAL.		

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

℄ -Y5- (NC 55)

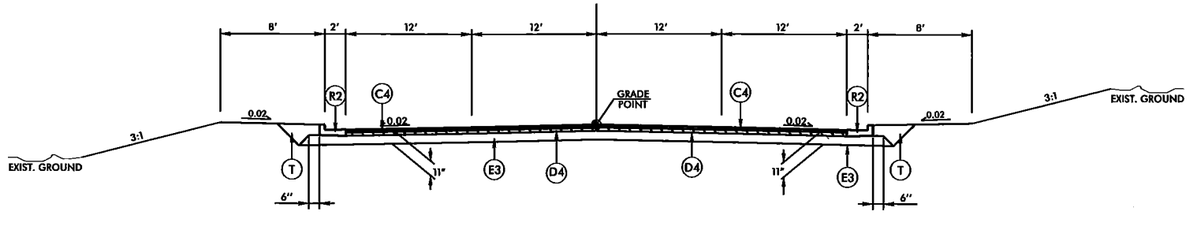


TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7
-Y5- STA. 23+35.00 to STA. 26+09.00

SEE PLANS FOR TURN LANES, TAPER LOCATIONS, & ISLANDS

℄ -Y5- (NC 55/NC 43)



TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 8
-Y5- STA. 26+09.00 to STA. 28+25.00

SEE PLANS FOR TURN LANES, TAPER LOCATIONS, & ISLANDS

REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	2-D
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

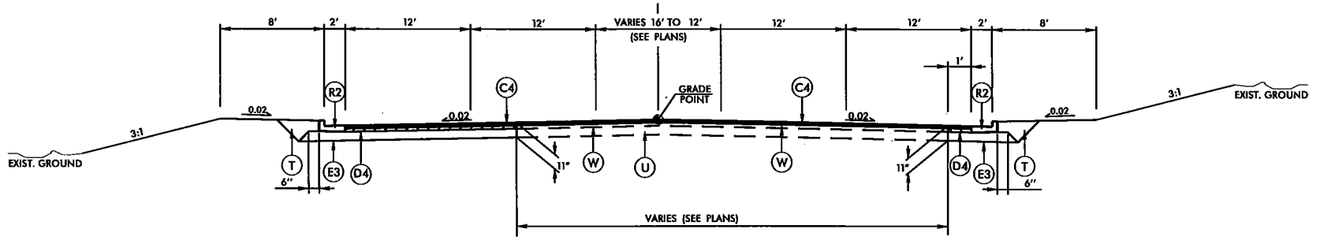
[redacted]

PAVEMENT SCHEDULE							
C1	PROP. APPROX. 2" TYPE S9.5B	D3	PROP. VAR. DEPTH TYPE I19.0B	J1	PROP. 8" AGGREGATE BASE COURSE.	U	EXISTING PAVEMENT.
C2	PROP. APPROX. 3" TYPE S9.5B	D4	PROP. APPROX. 4" TYPE I19.0C	J2	PROP. 6" AGGREGATE BASE COURSE.	W	WEDGING
C3	PROP. VAR. DEPTH TYPE S9.5B	D5	PROP. VAR. DEPTH TYPE I19.0C	P1	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.		
C4	PROP. APPROX. 3" TYPE S9.5C	E1	PROP. APPROX. 4" TYPE B25.0B	R1	1'-6" CONCRETE CURB AND GUTTER.		
C5	PROP. VAR. DEPTH TYPE S9.5C	E2	PROP. VAR. DEPTH TYPE B25.0B	R2	2'-6" CONCRETE CURB AND GUTTER.		
D1	PROP. APPROX. 2½" TYPE I19.0B	E3	PROP. APPROX. 4" TYPE B25.0C	R3	SHOULDER BERM GUTTER		
D2	PROP. APPROX. 3" TYPE I19.0B	E4	PROP. VAR. DEPTH TYPE B25.0C	T	EARTH MATERIAL.		

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

REVISIONS

℄ -Y5- (NC 55/NC 43)



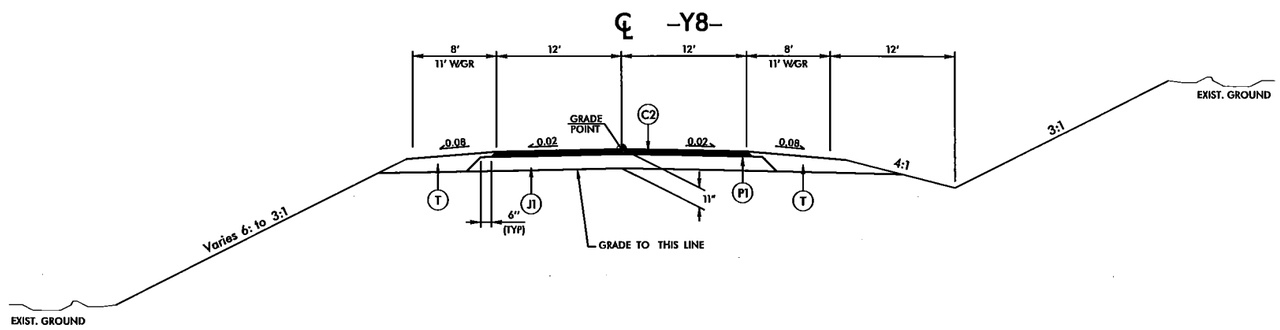
TYPICAL SECTION NO. 9

USE TYPICAL SECTION NO. 9

-Y5- STA. 28+25.00 to STA. 43+50.00

SEE PLANS FOR TURN LANES, TAPER LOCATIONS, & ISLANDS

℄ -Y8-



TYPICAL SECTION NO. 10

USE TYPICAL SECTION NO. 10

-Y8- STA. 10+47.18 to STA. 25+11.14

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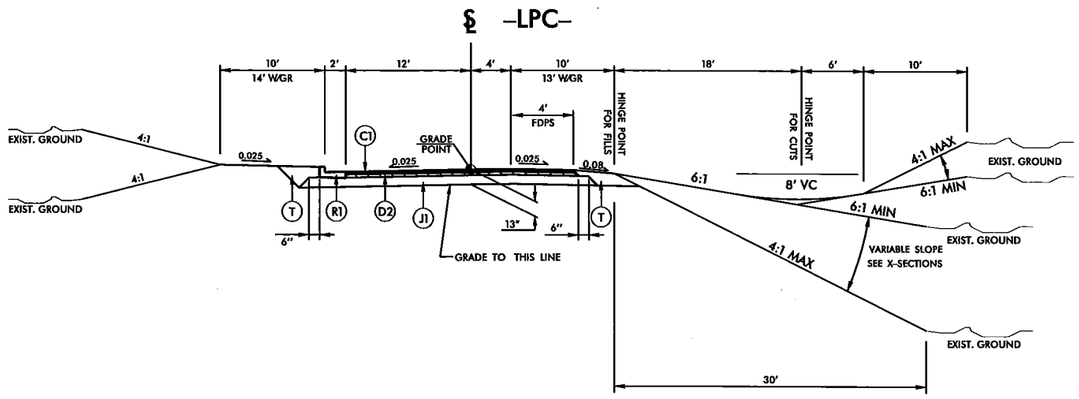
mmoore

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	2-E
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

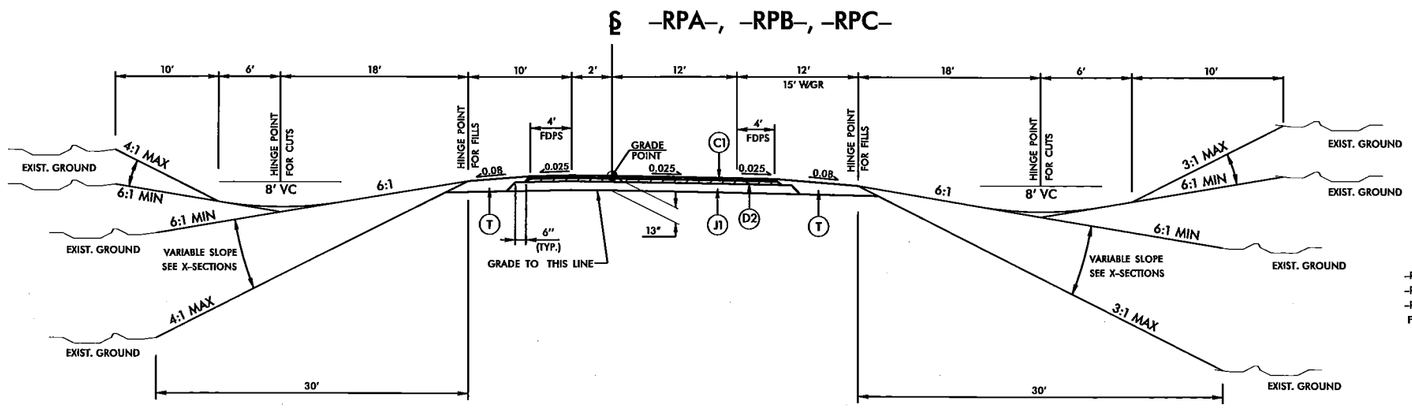
PAVEMENT SCHEDULE							
C1	PROP. APPROX. 2" TYPE S9.5B	D3	PROP. VAR. DEPTH TYPE I19.0B	J1	PROP. 8" AGGREGATE BASE COURSE.	U	EXISTING PAVEMENT.
C2	PROP. APPROX. 3" TYPE S9.5B	D4	PROP. APPROX. 4" TYPE I19.0C	J2	PROP. 6" AGGREGATE BASE COURSE.	W	WEDGING
C3	PROP. VAR. DEPTH TYPE S9.5B	D5	PROP. VAR. DEPTH TYPE I19.0C	P1	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.		
C4	PROP. APPROX. 3" TYPE S9.5C	E1	PROP. APPROX. 4" TYPE B25.0B	R1	1'-6" CONCRETE CURB AND GUTTER.		
C5	PROP. VAR. DEPTH TYPE S9.5C	E2	PROP. VAR. DEPTH TYPE B25.0B	R2	2'-6" CONCRETE CURB AND GUTTER.		
D1	PROP. APPROX. 2½" TYPE I19.0B	E3	PROP. APPROX. 4" TYPE B25.0C	R3	SHOULDER BERM GUTTER		
D2	PROP. APPROX. 3" TYPE I19.0B	E4	PROP. VAR. DEPTH TYPE B25.0C	T	EARTH MATERIAL.		

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



TYPICAL SECTION NO. 11

USE TYPICAL SECTION NO. 11
–LPC– STA. 10+00.00 to STA. 23+11.12
FOR GORE AREAS USE –Y3– PAVEMENT DESIGN. (TYPICAL SECTION NO. 5)



TYPICAL SECTION NO. 12

USE TYPICAL SECTION NO. 12
–RPA– STA. 10+00.00 to STA. 29+93.04
–RPB– STA. 10+00.00 to STA. 30+36.67
–RPC– STA. 10+00.00 to STA. 26+01.39
FOR GORE AREAS USE –Y3– PAVEMENT DESIGN. (TYPICAL SECTION NO. 5)

REVISIONS

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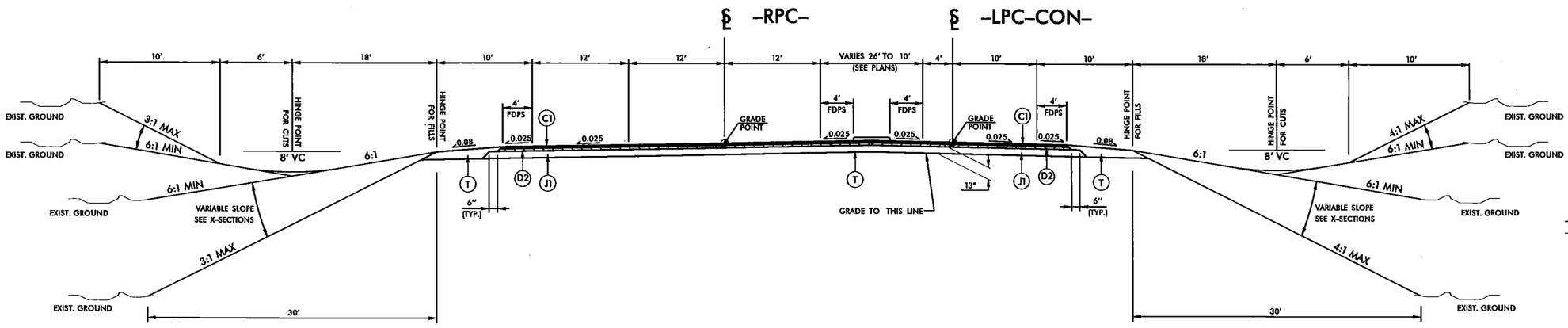
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	2-F
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

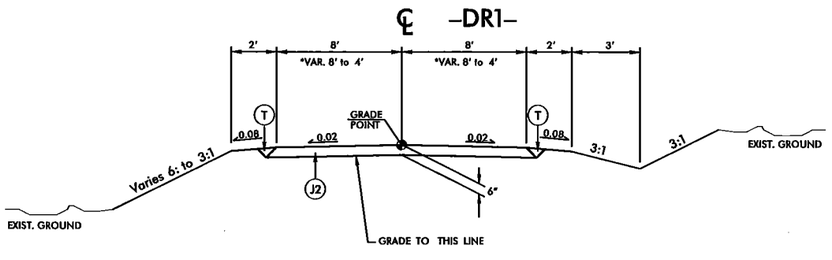
PAVEMENT SCHEDULE							
C1	PROP. APPROX. 2" TYPE S9.5B	D3	PROP. VAR. DEPTH TYPE I19.0B	J1	PROP. 8" AGGREGATE BASE COURSE.	U	EXISTING PAVEMENT.
C2	PROP. APPROX. 3" TYPE S9.5B	D4	PROP. APPROX. 4" TYPE I19.0C	J2	PROP. 6" AGGREGATE BASE COURSE.	W	WEDGING
C3	PROP. VAR. DEPTH TYPE S9.5B	D5	PROP. VAR. DEPTH TYPE I19.0C	P1	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.		
C4	PROP. APPROX. 3" TYPE S9.5C	E1	PROP. APPROX. 4" TYPE B25.0B	R1	1'-6" CONCRETE CURB AND GUTTER.		
C5	PROP. VAR. DEPTH TYPE S9.5C	E2	PROP. VAR. DEPTH TYPE B25.0B	R2	2'-6" CONCRETE CURB AND GUTTER.		
D1	PROP. APPROX. 2½" TYPE I19.0B	E3	PROP. APPROX. 4" TYPE B25.0C	R3	SHOULDER BERM GUTTER		
D2	PROP. APPROX. 3" TYPE I19.0B	E4	PROP. VAR. DEPTH TYPE B25.0C	T	EARTH MATERIAL.		

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



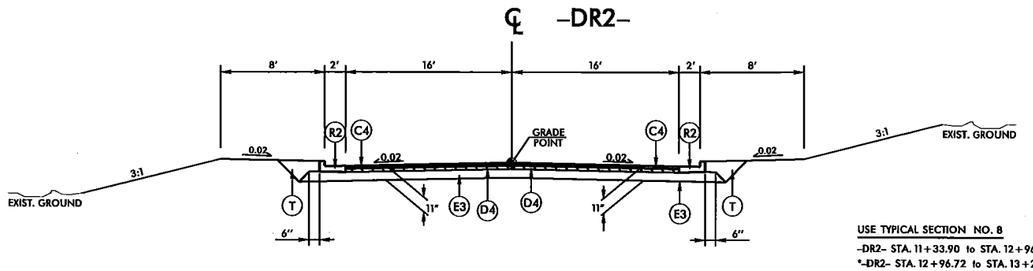
USE TYPICAL SECTION NO. 13
-RPC- STA. 26+01.39 to STA. 27+31.42
-LPC-CON- STA. 11+00.65 to STA. 12+31.49

TYPICAL SECTION NO. 13



USE TYPICAL SECTION NO. 14
-DR1- STA. 10+57.14 to STA. 12+04.36
*-DR1- STA. 12+04.36 to STA. 12+75.49

TYPICAL SECTION NO. 14



USE TYPICAL SECTION NO. 8
-DR2- STA. 11+33.90 to STA. 12+96.72
*-DR2- STA. 12+96.72 to STA. 13+26.72

SEE PLANS FOR TAPER LOCATIONS, & ISLANDS

TYPICAL SECTION NO. 8

REVISIONS

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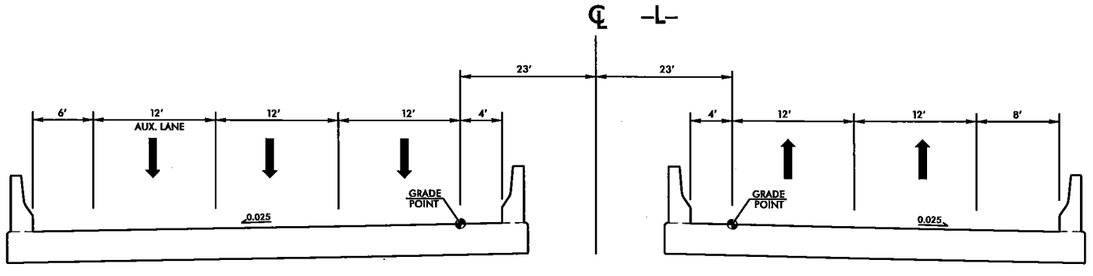
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	2-G
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

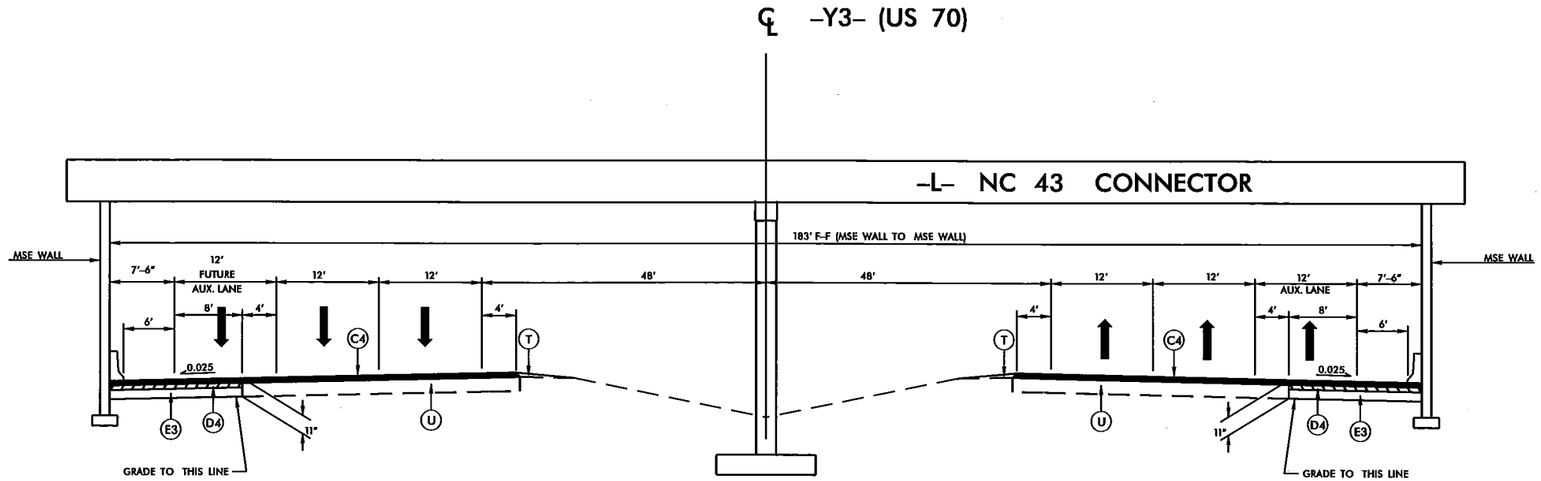
[redacted]

PAVEMENT SCHEDULE							
C1	PROP. APPROX. 2" TYPE S9.5B	D3	PROP. VAR. DEPTH TYPE I19.0B	J1	PROP. 8" AGGREGATE BASE COURSE.	U	EXISTING PAVEMENT.
C2	PROP. APPROX. 3" TYPE S9.5B	D4	PROP. APPROX. 4" TYPE I19.0C	J2	PROP. 6" AGGREGATE BASE COURSE.	W	WEDGING
C3	PROP. VAR. DEPTH TYPE S9.5B	D5	PROP. VAR. DEPTH TYPE I19.0C	P1	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.		
C4	PROP. APPROX. 3" TYPE S9.5C	E1	PROP. APPROX. 4" TYPE B25.0B	R1	1'-6" CONCRETE CURB AND GUTTER.		
C5	PROP. VAR. DEPTH TYPE S9.5C	E2	PROP. VAR. DEPTH TYPE B25.0B	R2	2'-6" CONCRETE CURB AND GUTTER.		
D1	PROP. APPROX. 2½" TYPE I19.0B	E3	PROP. APPROX. 4" TYPE B25.0C	R3	SHOULDER BERM GUTTER		
D2	PROP. APPROX. 3" TYPE I19.0B	E4	PROP. VAR. DEPTH TYPE B25.0C	T	EARTH MATERIAL.		

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



TYPICAL SECTION ON STRUCTURE
(NC 43 CONNECTOR OVER US 70)



TYPICAL SECTION OF ROADWAY UNDER STRUCTURE

NOTE:
MIN. VERTICAL CLEARANCE = 17'-0"

REVISIONS

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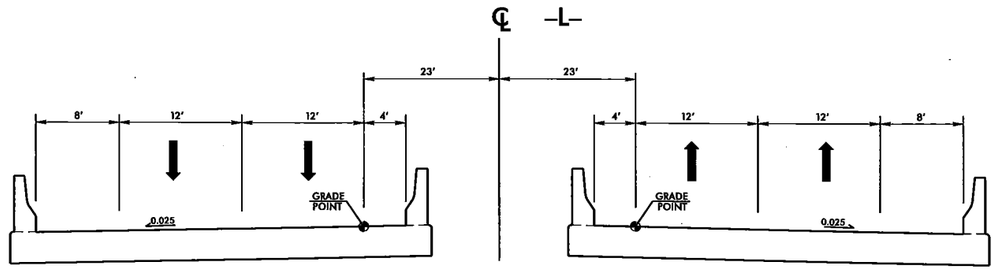
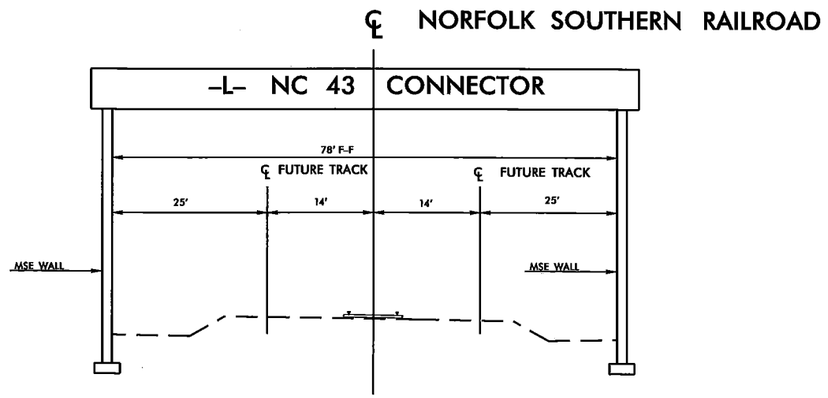
PAVEMENT SCHEDULE							
C1	PROP. APPROX. 2" TYPE S9.5B	D3	PROP. VAR. DEPTH TYPE I19.0B	J1	PROP. 8" AGGREGATE BASE COURSE.	U	EXISTING PAVEMENT.
C2	PROP. APPROX. 3" TYPE S9.5B	D4	PROP. APPROX. 4" TYPE I19.0C	J2	PROP. 6" AGGREGATE BASE COURSE.	W	WEDGING
C3	PROP. VAR. DEPTH TYPE S9.5B	D5	PROP. VAR. DEPTH TYPE I19.0C	P1	PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD.	NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.	
C4	PROP. APPROX. 3" TYPE S9.5C	E1	PROP. APPROX. 4" TYPE B25.0B	R1	1'-6" CONCRETE CURB AND GUTTER.		
C5	PROP. VAR. DEPTH TYPE S9.5C	E2	PROP. VAR. DEPTH TYPE B25.0B	R2	2'-6" CONCRETE CURB AND GUTTER.		
D1	PROP. APPROX. 2½" TYPE I19.0B	E3	PROP. APPROX. 4" TYPE B25.0C	R3	SHOULDER BERM GUTTER		
D2	PROP. APPROX. 3" TYPE I19.0B	E4	PROP. VAR. DEPTH TYPE B25.0C	T	EARTH MATERIAL.		

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	2-H
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



TYPICAL SECTION OF STRUCTURE
-L- OVER NORFOLK SOUTHERN RAILROAD



TYPICAL SECTION OF RAILROAD APPROACHING OVERHEAD STRUCTURE

NOTE:
MIN. VERTICAL CLEARANCE = 23'-0"

REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	3-A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

RIGHT OF WAY AREA DATA SHEET

PARCEL NO.	PROPERTY OWNERS NAME	TOTAL ACREAGE	AREA TAKEN	AREA REMAINING RIGHT	AREA REMAINING LEFT	CONSTR. EASEMENT	PERMANENT DRAINAGE EASEMENT	TEMPORARY DRAINAGE EASEMENT	PERMANENT UTILITY EASEMENT
1	WEYERHAEUSER COMPANY	6,011.06 Ac	68.22 Ac	400.00 Ac	5,542.84 Ac			0.38 Ac	1.28 Ac
2	MGR PROPERTIES LLC	104.54 Ac	25.47 Ac	55.49 Ac	23.58 Ac			0.32 Ac	2.74 Ac
3	AMITAL SPINNING CORP.	71.55 Ac	(No Claim)						
3A	WASHINGTON FORK INVESTORS, LLC	41.72 Ac	2.91 Ac	2.36 Ac	36.45 Ac				
4	KATHERINE C. HAROLDSON, ET AL	17.32 Ac	3.19 Ac	1.08 Ac	13.05 Ac				
5	JAMES ROBERT CIVILS, ET UX	2.86 Ac	0.16 Ac	2.70 Ac		1,542 sf			
6	REBA H. GRIFFIN	1.39 Ac	0.14 Ac	1.25 Ac		20 sf			
7	HELMUT TRESCHAN	1.33 Ac	0.62 Ac	0.71 Ac					
8	DTF LLC	3.59 Ac	2.03 Ac		1.56 Ac				3,347 sf
9	LEAMON C. PACE SR., ET UX	1.16 Ac	2,529 sf	1.10 Ac					
10	VIRGIL D. ORDIWAY, Widow	29,645 sf	2,787 sf	26,858 sf					
11	PATRICIA T. TRIPP & TERESA TRIPP	1.86 Ac	0.94 Ac	0.90 Ac				485 sf	0.18 Ac
12	ESSIE H. JENKINS, ET AL	1.74 Ac	0.22 Ac		1.52 Ac	299 sf			
13	VIRGIL D. ORDIWAY, Widow	11,867 sf	1,682 sf	10,185 sf					
14	MARGARET D. BENEDETTO	18.44 Ac	0.47 Ac	17.97 Ac					
15	JOE L. CLARK, ET UX	38,810 sf	4,136 sf		34,674 sf				3,180 sf
16	DONALD K. WEBB	1.64 Ac	0.11 Ac		1.53 Ac		305 sf		2,315 sf
17	RODNEY C. ALLEN	10,454 sf	2,848 sf		7,606 sf				1,506 sf
18	BURLEIGH R. WEBB	6,000 sf	1,909 sf		4,091 sf				903 sf
19	DONALD K. WEBB, ET UX	40,014 sf	2,958 sf		37,057 sf				1,496 sf
20	JEFFRIE W. GARDNER, ET UX	1.65 Ac	1,644 sf	1.61 Ac		689 sf			
21	JOSEPH E. JONES, ET UX	32,427 sf	3,350 sf	29,077 sf		1,652 sf			
22	ORAL ROBERT TAYLOR, ET UX	37,471 sf	4,755 sf	32,716 sf		4,154 sf			
23	MARGARET D. BENEDETTO	7.56 Ac	0.37 Ac		7.19 Ac	0.10 Ac			
24	LEAMON C. PACE SR., ET UX	2.12 Ac	2,906 sf	2.05 Ac			218 sf		1020 sf
25	BARBARA FARROW, ET UX, Widow	32,670 sf	2,140 sf	30,530 sf			198 sf		951 sf
26	EBBIE HOWARD JR.	2.19 Ac	0.13 Ac	2.06 Ac				1,545 sf	
27	WILBERT A. JACKSON, ET AL	1.26 Ac	2,034 sf	1.21 Ac					
28	PATRICIA T. TRIPP & TERESA TRIPP	15,682 sf	8,240 sf		7,442 sf				2,649 sf
29	THOMAS & ERNEST JENKINS	32,670 sf			32,670 sf	138 sf			

REVISIONS

March 26,2007: Area taken for Parcel 2 changed from 25.66 Ac to 25.41 Ac. Area remaining RT. for parcel 2 changed from 55.30 Ac to 55.49 Ac
Eliminated TCE for parcel 34
Changed TCE for parcel 5 from 1624 sf to 1,542 sf.
Changed PUE for parcel 15 from 072 Ac to 3,152 sf.
Changed PUE for parcel 28 from 2645 Ac to 2649 sf.

April 30,2007: Increased PUE for Parcel Numbers 1,2,8,15,16,17,18,and 19. Added PUE for parcel Numbers 24 and 25.

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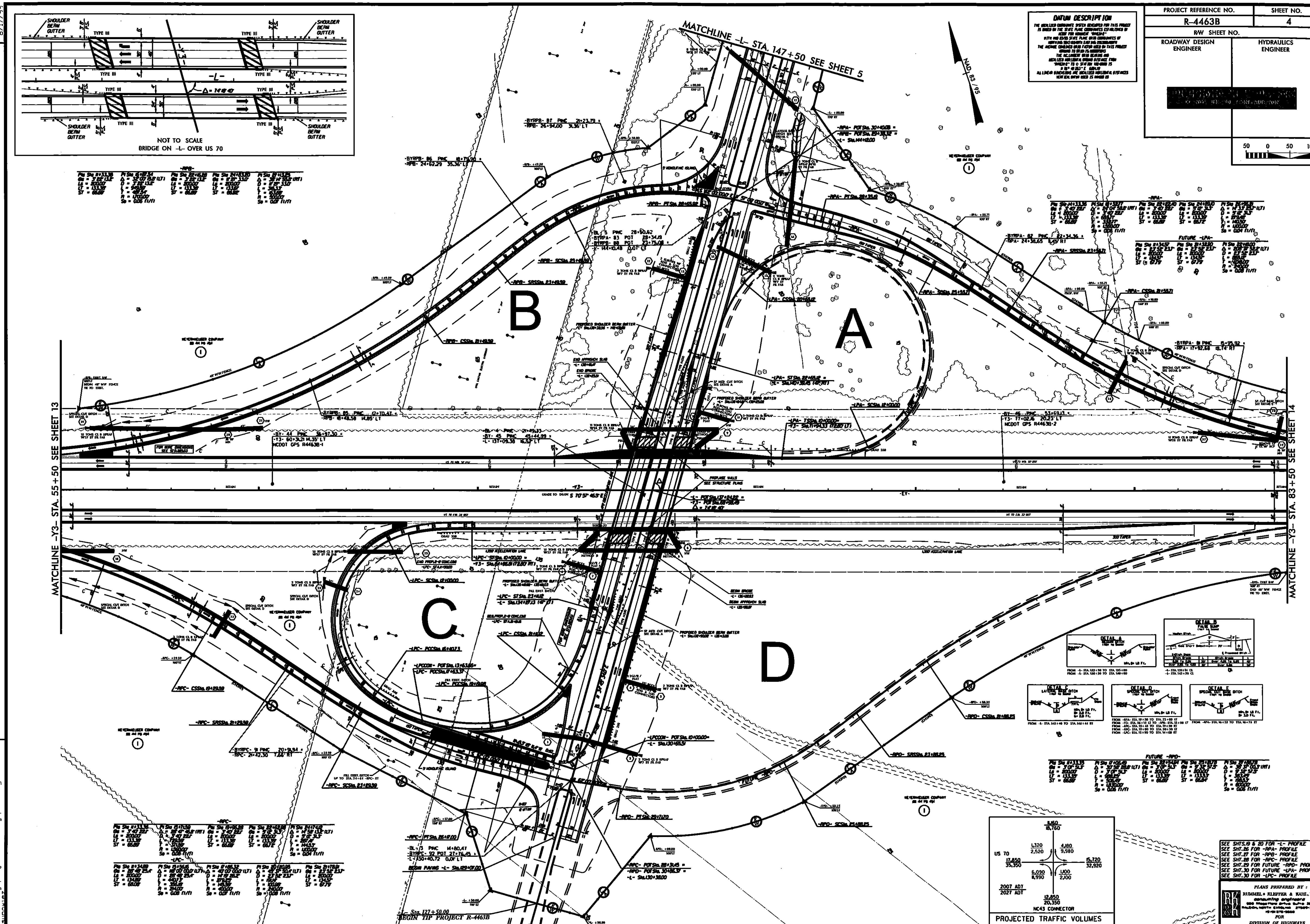
dsmoody

8/17/99

REVISIONS

March 26,2007: -RPB- monument at 25+49.59/100'Lt.was previously labeled 25+50.



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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

WEYERHAEUSER COMPANY
DB 414 PG 494
(1)

NAD 83/95

155

160

150

-L- +60.00
240' LT

-L- +80.00
160' LT

-L- +00.00
120' LT

-L- +50.00
150' LT

-L- +25.00
210' LT

-L- +50.00
120' LT

-L- +12.89
120' LT

-L- +12.89
110' LT

-L- +85.00
120' LT

TDE

(CHORD)

48" WW FENCE

-BL- 7 PINC 41+02.35 =
-L- 156+63.32 0.28' LT

2 TONS CL B RIPRAP
W/7 SY FIL FAB

8 TONS CL B RIPRAP
W/21 SY FIL FAB

300' TAPER

PROP. 5' MONOLITHIC CONCRETE ISLAND

350' TAPER

SP MED CUT DITCH
SEE DETAIL L

425' FULL TURN LANE

150' TAPER

PSRM

FS DET B

2GI/B

WB-62

N 34° 45' 34.0" E

40' TYP.

HW

DIRECT EXIST. DITCH
TO PROP. INVERT

-L- SCSta. 152+12.89

-L- TSSta. 150+12.89

-L- +00.00
110' RT

-L- +00.00
145' RT

-L- +00.00
110' RT

-BL- 6 PINC 34+75.35 =
-L- 150+35.21 1.56' RT

MATCHLINE -L- STA. 147+50 SEE SHEET 4

MATCHLINE -L- STA. 160+50 SEE SHEET 6

-L-

PIs Sta 151+46.23	PI Sta 157+97.50	PIs 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 = 1154.75'	LT = 133.34'
ST = 66.67'	T = 584.61'	ST = 66.67'
	R = 3,000.00'	
	Se = 0.05 ft/ft	

WEYERHAEUSER COMPANY
DB 414 PG 494
(1)

DETAIL L
MEDIAN DITCH
(Not To Scale)

Shoulder Point — 3:1 or Flatter — D — 3:1 or Flatter — Shoulder Point

Min. D= 1.0 Ft.

FROM -L- STA. 156+50 TO STA. 160+50

DETAIL B
FALSE SUMP
(Not To Scale)

Median Ditch — 9' — 2' — 20' — GI etc. — ℄ Proposed Ditch

-L- (See Chart Below) — 5

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. 156+30 CL

SEE SHT.20 FOR -L- PROFILE

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FOR
DIVISION OF HIGHWAYS

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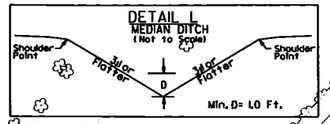
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

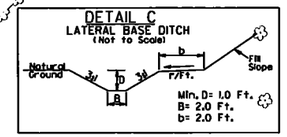
DETAIL L
MEDIAN DITCH
(Not to Scale)



Min. D= 1.0 Ft.

FROM -L- STA. 160+50 TO STA. 162+95
FROM -L- STA. 165+05 TO STA. 171+50

DETAIL C
LATERAL BASE DITCH
(Not to Scale)



Min. D= 1.0 Ft.
B= 2.0 Ft.
b= 2.0 Ft.

FROM -L- STA. 163+39 TO STA. 166+88 LT

8/17/99

REVISIONS

WEYERHAEUSER COMPANY
DB 414 PG 494
(1)

N60°38'00"E

-BL- 8 PINC 48+30.43 =
-L- 163+93.84 5.75' RT

-BL- 9 PINC 55+00.89 =
-L- 170+64.45 6.17' RT

-L- +67.64
135' LT
END 48" WW FENCE

-L- +44.84
135' LT
BEGIN 48" WW FENCE

-L- Sta. 165+67.64

80'
ACCESS POINT
(CHORD)

350' TAPER

-L- +00.00
110' LT

5 TONS CL B RIPRAP
W/14 SY FIL FAB

PROP. 5' MONOLITHIC
CONCRETE ISLAND

LATERAL BASE DITCH
SEE DETAIL C

48" WW FENCE

150' TAPER

75'

425' FULL TURN LANE

SP MED CUT DITCH
SEE DETAIL L

DIRECT EXIST. DITCH
TO PROP. INVERT

-L- +67.64
110' RT
END 48" WW FENCE

-L- +50.05
110' RT
BEGIN 48" WW FENCE

TAPER FENCE

-L- +00.00
145' LT

-L- +00.00
110' RT

3 TONS CL B RIPRAP
W/10 SY FIL FAB

180'

WB-62

PSRM

MATCHLINE -L- STA. 160+50 SEE SHEET 5

MATCHLINE -L- STA. 174+50 SEE SHEET 7

-L- POS Sta 164+09.00 =
-DRI- POTSta. 10+00.00

-L- CSSta. 163+67.64
-DRI- PCSta. 10+80.79

-DRI- PTSta. 11+58.53
-DRI- PCSta. 12+04.36

-DRI- PTSta. 12+75.49
END CONSTRUCTION

-DRI- POTSta. 13+38.34

S 75°55'16.6" E
-DRI-

WEYERHAEUSER COMPANY
DB 414 PG 494
(1)

-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	

SEE SHT. 34 FOR -DRI- PROFILE

SEE SHTS. 20 & 21 FOR -L- PROFILE

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FOR
DIVISION OF HIGHWAYS

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roadway

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

REVISIONS

8/17/99

March 26, 2007: -L- monument at exist r/w (187+11.02)/195' Lt. was previously labeled 190' Lt.
April 19, 2007: -L- PUE 186+65 EXIST. EASMENT/380' Rt. was previously located @ 186+89 EXISTING EASMENT/280' RT.
April 30, 2007: Increased PUE for Parcel Number 1.

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DETAIL B
FALSE SUMP
(Not to Scale)

Median Ditch
9'
2'
-L- (See Chart Below)
20'
@ etc.
S
€ 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. 182+68 CL

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

Natural Ground
3H
D
1H
b
F/Ft.
Fill Slope

Min. D= 1.5Ft.
b= 2.0Ft.

FROM -L- STA. 185+10 TO STA. 187+50 LT

DETAIL A
MEDIAN DITCH
(Not to Scale)

Shoulder Point
4:1 or Flatter
D
4:1 or Flatter
Shoulder Point

Min. D= 1.0 Ft.

FROM -L- STA. 174+50 TO STA. 176+50

NAD 83/95

WLB

-Y1- POT Sta. 10+00.00

WEYERHAEUSER COMPANY
DB 414 PG 494
(1)

180

185

-BL- 10 PINC 61+55.85 =
-L- 177+19.41 4.51' RT

-BL- 11 PINC 68+10.08 =
-L- 183+73.64 2.91' RT

-L- EXIST R/W
195' LT

LATERAL V DITCH
SEE DETAIL H

-L- +50.00
110' LT

2 TONS CL B RIPRAP
W/7 SY FIL FAB

48" WW FENCE

PROPOSED SHOULDER BERM GUTTER
-L- Sta.179+83.44 - 189+01.14

5 TONS CL B RIPRAP
W/14 SY FIL FAB

SP MED CUT DITCH
SEE DETAIL A

2 ELBOWS W/ ROD & LUG CONNECTORS

15" BCCS

2GI/B FLAT

GRAU 350

FS DET 'B'

2GI/B

N 60° 38' 00.0" E

PROPOSED SHOULDER BERM GUTTER
-L- Sta.179+83.44 - 190+09.35

3 TONS CL B RIPRAP
W/10 SY FIL FAB

-L- +00.00
110' RT

-L- +00.00
170' RT

-L- EXIST. EASEMENT
PROP. R/W

-L- EXIST. EASEMENT
380' RT.

CP&L EXISTING ELECTRIC EASEMENT

PUE

MATCHLINE -L- STA. 174+50 SEE SHEET 6

MATCHLINE -L- STA. 187+50 SEE SHEET 8

SEE SHT. 21 FOR -L- PROFILE

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FOR
DIVISION OF HIGHWAYS

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

8/17/99

REVISIONS

March 26,2007: -L- monument at existing r/w(193+84.65)/205' Rt.was prev
April 19,2007: -L- PUE 189+00/290' Rt.flag was added and PUE was adj
April 30,2007: Increased PUE for Parcel Numbers 1 and 2.

MATCHLINE -L- STA. 187+50 SEE SHEET 7

MATCHLINE -L- STA. 202+00 SEE SHEET 9

CAROLINA POWER & LIGHT COMPANY
DB 960 PG 89

DETAIL A
MEDIAN DITCH
(Not to Scale)

Shoulder Point — 44.0' or Flatter — D — 44.0' or Flatter — Shoulder Point

Min. D= 1.0 Ft.

DETAIL B
FALSE SUMP
(Not to Scale)

Median Ditch — 9' — 2' — L (See Chart Below) — 20' — GI etc. — S — ℄ 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'

FROM -L- STA. 188+00 TO STA. 189+50
FROM -L- STA. 191+00 TO STA. 193+50

-L- STA. 198+22 CL

BL- 12 PINC 74+79.76
-BYI- 55 PINC 15+75.65 =
-L- 190+43.31 0.63' RT

TYPE III — 8' — 24" — 36" — 5'-8" P.S. — .025 — 4" P.S. — 2' — 7'-8" P.S.

SHOULDER BERM GUTTER

Δ = 45° 28' 08"

BRIDGE ON -L- OVER RAILROAD NTS

MGR PROPERTIES LLC
DB 2196 PG 196
PC G SLIDE 192-H
(2)

NAD 83 /95

-BL- 14 PINC 84+11.27 =
-L- 199+74.66 4.21' RT

-L- +00.00
120' LT

2 ELBOWS W/ ROD & LUG CONNECTORS

2 TONS CL B RIPRAP W/7 SY FIL FAB

2 TONS CL B RIPRAP W/14 SY FIL FAB

2 TONS CL B RIPRAP W/7 SY FIL FAB

-L- +86.00
20' LT

-L- EXIST R/W
200' LT

-L- +40.38
PROP. R/W

-L- +40.38
BEGIN 48" WW FENCE TIE TO MSE WALL

LATERAL V DITCH SEE DETAIL H

-L- +28.66
END 48" WW FENCE TIE TO MSE WALL

CONCRETE LINED DITCH SEE DETAIL G

PROPOSED SHOULDER BERM GUTTER
-L- Sta.179+83.44 - 189+01.14

TYPE III — TYPE M350 — 5' MED. CUT DITCH SEE DETAIL A

S 77° 31' 50.0" E

LATERAL V DITCH SEE DETAIL J

TAIL DITCH SEE DETAIL I

CL IV METHOD B

END BRIDGE
-L- 191+06.56

END APPROACH SLAB
-L- 191+30.06

-L- +00.00
185' LT

PROPOSED SHOULDER BERM GUTTER
-L- Sta.190+76.11 - 202+00.06

-BL- 13 PINC 79+21.30 =
-L- 194+84.80 6.17' LT

15" RCCS

2 ELBOWS W/ ROD & LUG CONNECTORS

2 TONS CL B RIPRAP W/7 SY FIL FAB

2GI/B

FS DET B

2GI/B FLAT

5' RCCS

48" WW FENCE

N 60° 38' 00.0" E

PROPOSED SHOULDER BERM GUTTER
-L- Sta.179+83.44 - 190+09.35

CONCRETE LINED DITCH SEE DETAIL G

BEGIN APPROACH SLAB
-L- 189+55.31

BEGIN BRIDGE
-L- 189+78.90

-L- +45.08
END 48" WW FENCE TIE TO MSE WALL

TAIL DITCH SEE DETAIL I

LATERAL V DITCH SEE DETAIL J

2 TONS CL B RIPRAP W/7 SY FIL FAB

PROP. MSE WALLS
SEE STRUCTURE PLANS

-L- +53.24
BEGIN 48" WW FENCE TIE TO MSE WALL

PROPOSED SHOULDER BERM GUTTER
-L- Sta.191+81.87 - 202+03.50

CONCRETE LINED DITCH SEE DETAIL G

CL IV METHOD B

2 TONS CL B RIPRAP W/7 SY FIL FAB

LATERAL V DITCH SEE DETAIL J

-L- +69.00
175' RT

-L- EXIST R/W
205' RT

-L- +00.00
170' RT

48" WW FENCE

2 TONS CL B RIPRAP W/7 SY FIL FAB

2 ELBOWS W/ ROD & LUG CONNECTORS

-L- +00.00
120' RT

-L- +00.00
220.00' RT.

WEYERHAEUSER COMPANY
DB 414 PG 494
(1)

-L- +45.08
PROP. R/W

-L- EXIST R/W
200' RT

-L- +00.00
290' RT.

-L- EXIST. EASEMENT
305' RT.

-L- POT Sta.190+42.73
-Y1- POT Sta.15+69.21
Δ = 45° 28' 08"

PUE

CP&L EXISTING ELECTRIC 28' EASEMENT

NORTH CAROLINA NATURAL GAS 30' EASEMENT

-L- +20.00
270' RT.

-L- EXIST. EASEMENT
315' RT.

-BYI- 56 PINC 21+67.86 =
-Y1- 21+62.28 0.03' RT
-L- 194+58.63 422.81' RT
-Y1- POT Sta. 21+97.02

2 TONS CL B RIPRAP W/7 SY FIL FAB

2 ELBOWS W/ ROD & LUG CONNECTORS

DETAIL F
LATERAL 'V' DITCH
(Not to Scale)

Natural Ground — 3:1 — D — 3:1 — b — F/Ft. — Fill Slope

Min. D= 1.0Ft.
b= 2.0Ft.

FROM -L- STA. 192+65 TO STA. 194+05 RT

DETAIL I
TAIL DITCH
(Not to Scale)

Fill Slope or Natural Ground — 3:1 — D — 3:1 — Fill Slope or Natural Ground

Min. D= 1.0 Ft.
• Line ditch with PSRM

* -L- STA. 190+40 RT, L=50', S=34.00%, DDE=NA
-L- STA. 190+40 RT, L=45', S=0.22%, DDE=5 CY
* -L- STA. 190+45 LT, L=60', S=33.76%, DDE=NA

DETAIL G
CONCRETE LINED DITCH
(Not to Scale)

0.5 Ft. min — 4 Ft. — 1Ft. — 2H — FILL SLOPE SAME OR STEEPER — 0.5Ft.+/- — Wall/Barrier

-L- STA. 189+20 LT, APPR. LENGTH=145'
-L- STA. 190+40 RT, APPR. LENGTH=100'
-L- STA. 190+45 LT, APPR. LENGTH=50'
-L- STA. 191+60 RT, APPR. LENGTH=145'

DETAIL H
LATERAL 'V' DITCH
(Not to Scale)

Natural Ground — 3:1 — D — 3:1 — b — F/Ft. — Fill Slope

Min. D= 1.5Ft.
b= 2.0Ft.

FROM -L- STA. 187+50 TO STA. 188+15 LT

DETAIL J
LATERAL 'V' DITCH
(Not to Scale)

Natural Ground — 3:1 — D — 3:1 — b — F/Ft. — Fill Slope

Min. D= 0.5Ft.
b= 2.0Ft.

FROM -L- STA. 190+38 TO STA. 190+75 LT (ACTUAL LENGTH=140')
FROM -L- STA. 190+46 TO STA. 190+77 RT (ACTUAL LENGTH=100')

SEE SHTS.21 & 22 FOR -L- PROFILE

PLANS PREPARED BY :
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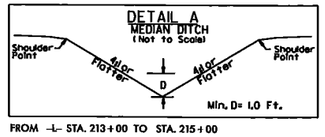
FOR
DIVISION OF HIGHWAYS

8/17/99

REVISIONS

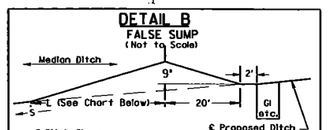
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL A
MEDIAN DITCH
(Not to Scale)



FROM -L- STA. 213+00 TO STA. 215+00

DETAIL B
FALSE SUMP
(Not to Scale)



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. 204+22 CL
-L- STA. 210+22 CL

S 59°58'38" W 4741.48'

-T2- 113 POT 5+00.00
ELEV=25.79' NAIL SET

-T2- 114 PINC 5+89.77
ELEV=25.28' NAIL SET

-T2- 115 PINC 7+15.12
ELEV=23.81' NAIL SET

-T2- 116 PINC 8+54.93
ELEV=25.32' NAIL SET

CP&L EXISTING ELECTRIC EASEMENT

NAD 83/95

205 210 215

S 75°15'30.4" E

S 89°15'52.8" E

N 82°12'30.8" E

MGR PROPERTIES LLC
DB 2196 PG 196
PC G SLIDE 192-H
(2)

-BL- 15 PINC 91+70.28 =
-L- 207+33.66 0.91' RT

-BL- 16 PINC 99+31.91 =
-L- 214+95.29 0.36' RT
-T2- 117 PINC 8+62.68

MATCHLINE -L- STA. 202+00 SEE SHEET 8

MATCHLINE -L- STA. 216+00 SEE SHEET 10

-L- +00.00
110' LT

2 TONS CL B RIPRAP
W/7 SY FIL FAB

48" WW FENCE

GRAU 350

FS DET B

2GI/B

N 60° 38' 00.0" E

-L-

SP MED CUT DITCH
SEE DETAIL A

CAT-1

-T2- 118 PINC 10+18.86
ELEV=25.30' NAIL SET

-L- +00.00
110' RT

-L- +60.00
110' RT

-L- +70.00
145' RT

-L- +90.00
150' RT

TDE

8 TONS CL B RIPRAP
W/21 SY FIL FAB

100'

PUE

-L- +00.00
210' RT.

MGR PROPERTIES LLC
DB 2196 PG 196
PC G SLIDE 192-H
(2)

-T2- 119 PINC 11+61.78
ELEV=25.39' NAIL SET

N 60°38'00" E
828.72'

TEXFI INDUSTRIES INC.
DB 779 PG 84

AMTAL SPINNING CORP.
DB 1293 PG 326

-T2- 120 POT 12+98.88
ELEV=25.31' NAIL SET

AREA OF CONTAMINATED SOIL

SEE SHT.22 FOR -L- PROFILE

PLANS PREPARED BY :
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FOR
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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-
Pis Sta 219+23.81
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'

Pi 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

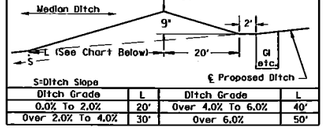
Pis Sta 234+61.10
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'

N 42° 00' 55" W 101.81'

KATHERINE C. HAROLDSON, et al
DB 1679 PG 107
4

NAD 83/95

DETAIL B
FALSE SUMP
(Not to Scale)



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

220

MGR PROPERTIES LLC
DB 2196 PG 196
PC G SLIDE 192-H
2

225

230

S 59°58'38" W 1716.66'
OLD FENCE POST

-BL- 18 PINC 109+64.44 =
-BY5- 93 POT 5+00.00
-L- 225+28.52 3.29' LT

-L- TSSta. 217+90.47

-L- SCSta. 219+90.47

-BL- 17 PINC 104+62.49 =
-L- 220+25.85 1.51' RT

80' ACCESS POINT

FUTURE CONNECTION

-L- +25.00
110' LT
END
48" WW FENCE

-L- +08.05
110' LT
BEGIN 48" WW FENCE

MATCHLINE -L- STA. 216+00 SEE SHEET 9

MATCHLINE -L- STA. 230+00 SEE SHEET 11

-L- +90.47
110' LT

-L- +90.47
110' LT

(CHORD)

48" WW FENCE

40' TYP.

5 TONS CL B RIPRAP
W/14 SY FIL FAB

380' FULL TURN LANE

N 60° 38' 00.0" E

15"

FS DET B

71 2GI/B

R=350'-85'

R=6'

380' FULL TURN LANE

150' TAPERS

380' FULL TURN LANE

TDE

-L- +80.00
130' RT

-L- +80.00
110' RT

-L- +90.47
110' RT

(CHORD)

-L- +50.00
130' RT

48" WW FENCE

-L- +00.00
125' RT

MGR PROPERTIES LLC
DB 2196 PG 196
PC G SLIDE 192-H
2

-L- POCSta. 225+75.00 =
-Y8- POTSta. 10+00.00

R=180'-60'-180'
OFFSET = 6'

PROP. 5' MONOLITHIC CONCRETE ISLAND

R=2'

R=180'-60'-180'
OFFSET = 6'

73

72

3 TONS CL B RIPRAP
W/10 SY FIL FAB

-L- +15.00
110' RT

MGR PROPERTIES LLC
DB 2196 PG 196
PC G SLIDE 192-H
2

-Y8-
PI Sta 13+64.04
Δ = 11° 34' 28.0" (RT)
D = 7° 50' 55.5"
L = 223.91'
T = 112.84'
R = 730.00'
Se = 0.038 ft/ft

-Y8- PCSta. 12+51.20

-Y8- +15.00
100'LT

-Y8- +50.00
20' RT

-BY5- 94 PINC 8+35.91 =
-Y8- 13+31.88 32.76' RT

AMTAL SPINNING CORP.
DB 1293 PG 926
3

WASHINGTON FORK INVESTORS, LLC
DB 2242 PG 0876
3A

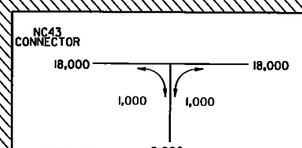
-Y8- +50.80
50' RT

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



2025 ADT

SR 1304
BOSCH BLVD.

PROJECTED TRAFFIC VOLUMES

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FOR
DIVISION OF HIGHWAYS

REVISIONS

8/17/99

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

[redacted]

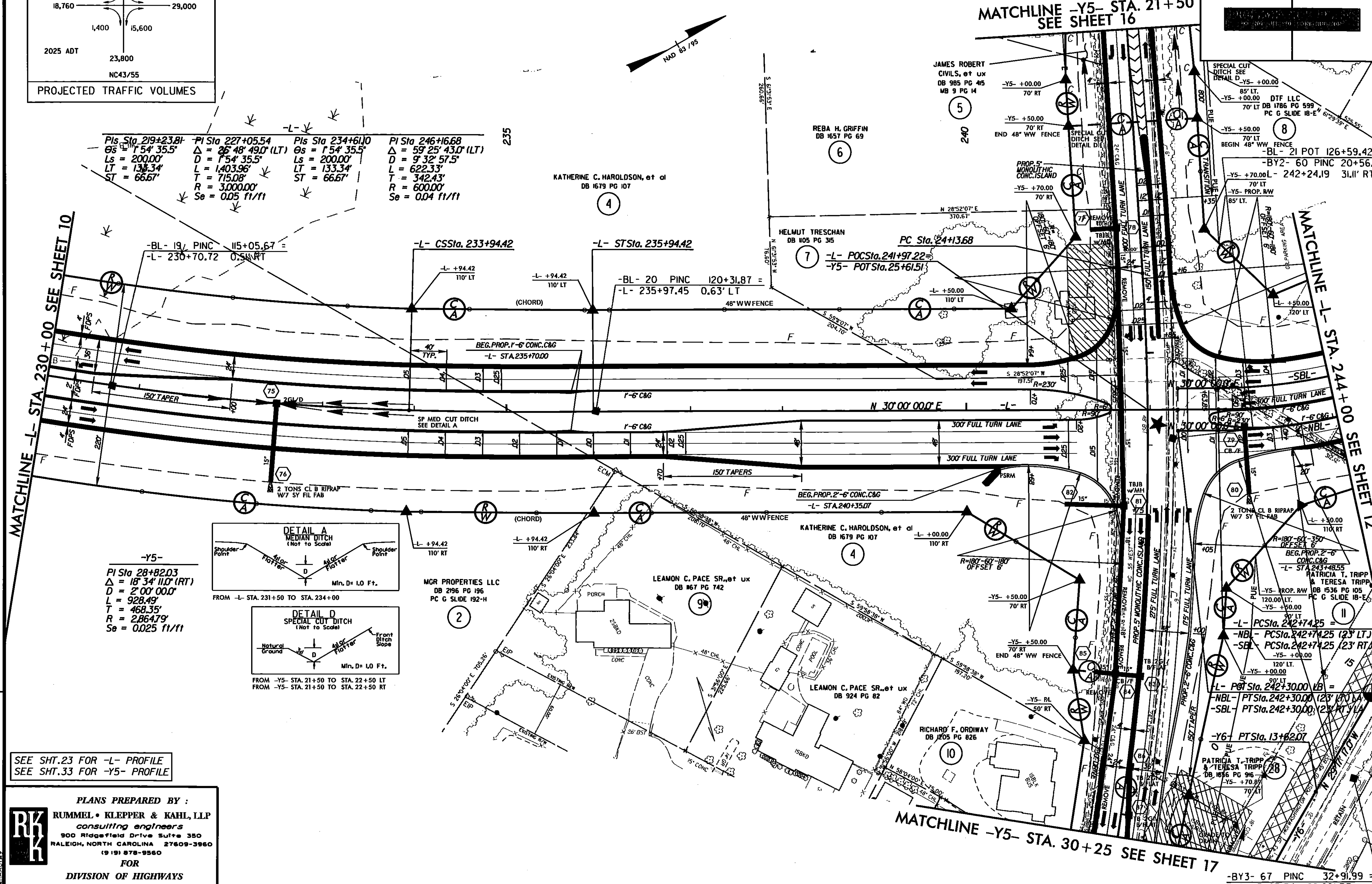
8/17/99

REVISIONS

April 30, 2007: Increased PUE on Parcel Number 8.

PROJECTED TRAFFIC VOLUMES

NC55 12,000; NC43 CONNECTOR 4,200 / 1,000; 18,760 — 29,000; 1,400 / 15,600; 2025 ADT; 23,800; NC43/55



-L- Curve Data

Pls Sta 219+23.81	PI Sta 227+05.54	Pls Sta 234+61.10	PI Sta 246+16.68
Θs = 1°54' 35.5"	Δ = 26°48' 49.0" (LT)	Θs = 1°54' 35.5"	Δ = 59°25' 43.0" (LT)
Ls = 200.00'	D = 1°54' 35.5"	Ls = 200.00'	D = 9°32' 57.5"
LT = 133.34'	L = 1,403.96'	LT = 133.34'	L = 622.33'
ST = 66.67'	T = 715.08'	ST = 66.67'	T = 342.43'
	R = 3,000.00'		R = 600.00'
	Se = 0.05 ft/ft		Se = 0.04 ft/ft

-Y5-

PI Sta 28+82.03
Δ = 18°34' 11.0" (RT)
D = 2°00' 00.0"
L = 928.49'
T = 468.35'
R = 2,864.79'
Se = 0.025 ft/ft

DETAIL A
MEDIAN DITCH
(Not to Scale)

Shoulder Point — 4:1 or Flatter — D — 4:1 or Flatter — Shoulder Point

Min. D= 1.0 Ft.

FROM -L- STA. 231+50 TO STA. 234+00

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground — 3:1 — D — 4:1 or Flatter — 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

SEE SHT. 23 FOR -L- PROFILE
SEE SHT. 33 FOR -Y5- PROFILE

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FOR
DIVISION OF HIGHWAYS

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

8/17/99

March 26,2007: -L- monument at 244+15/100' Rt.was previously labeled 244+50.
March 26,2007: -L- monument at 253+25/exist.r/w & 100' Rt. was previously labeled 253+00.

-SBL-
PI Sta 243+88.20
Δ = 22° 20' 32.6" (LT)
D = 9° 55' 47.8"
L = 225.00'
T = 113.95'
R = 577.00'
Se = 0.04 ft/ft

PI Sta 247+20.98
Δ = 37° 05' 10.4" (LT)
D = 8° 40' 02.8"
L = 427.88'
T = 221.74'
R = 661.05'
Se = 0.04 ft/ft

-SBL- PCCSta. 244+99.25

MATCHLINE -L- STA. 244+00 SEE SHEET 11

DONALD K. WEBB, et ux
DB 1121 PG 978
(19)

OWEN D. ANDREWS & BARBARA A. HARDY
DB 1490 PG 690

MARJORIE H. HILL
DB 699 PG 281
PC A SLIDE 94-A

MABLE LEE JENKINS
DB 584 PG 81
(29)

ESSIE H. JENKINS, et al
DB 622 PG 464
(12)

DTF LLC
DB 1786 PG 599
PC G SLIDE 18-E
(8)

VELMA R. NEWTON
DB 1089 PG 126

LAWRENCE LEE PHIFER
DB 1299 PG 247

MARGARET D. BENEDETTO
DB 2202 PG 297
(14)

PATRICIA T. TRIPP & TERESA TRIPP
DB 1536 PG 105
PC G SLIDE 18-E
(11)

MCDI PROPERTIES LLC
DB 2193 PG 213
PC G SLIDE 141-B

-L- +00.00 137' LT
-L- +60.00 160' LT
-L- +50.00 125' LT
-L- +20.00 108' LT END 48" WW FENCE
-L- +20.00 EXIST R/W
-L- +55.00 EXIST. R/W SPECIAL CUT DITCH SEE DETAIL D
-L- +70.00 PROP. R/W
-L- +15.00 100' RT
-L- +40.00 PROP. R/W
-L- +50.00 EXIST. R/W
-L- +20.00 EXIST. R/W
-L- +50.00 EXIST. R/W
-L- +00.00 110' RT 5 TONS CL B RIPRAP W/14 SY FIL FAB
-L- +96.58 100' RT END 48" WW FENCE
-L- +25.00 EXIST. R/W & 100' RT

-BY3- R66 PINC 25+67.54 =
-L- 248+37.09 29.84' RT

-BY3- 65 PINC 17+42.19 =
-L- 256+59.59 28.03' RT

CLEANOUT EXISTING ROADSIDE DITCH -L- STA. 253+00 TO STA. 259+00 RT FOR POSITIVE DRAINAGE

END PROJECT
-L- POTSta. 255+00.00

-NBL- POTSta.249+65.02 (6' LT) LB =
-SBL- PTSta.249+27.12 (6' RT) LB =
-L- POTSta.249+47.26 LA

-L- PTSta.248+96.58

-NBL- PTSta. 248+84.56

-Y6- POTSta. 18+50.60

-L-
PI Sta 246+16.68
Δ = 59° 25' 43.0" (LT)
D = 9° 32' 57.5"
L = 622.33'
T = 342.43'
R = 600.00'
Se = 0.04 ft/ft

-NBL-
PI Sta 246+10.06
Δ = 59° 25' 43.0" (LT)
D = 9° 44' 15.0"
L = 610.31'
T = 335.81'
R = 588.40'
Se = 0.04 ft/ft

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)
FROM -L- STA. 248+00 TO STA. 249+67 LT

DETAIL F
LATERAL 'V' DITCH
(Not to Scale)
FROM -L- STA. 246+00 TO STA. 248+00 LT

DETAIL K
LATERAL BASE DITCH
(Not to Scale)
FROM -L- STA. 247+00 TO STA. 253+00 RT

SEE SHT.23 & 24 FOR -L- PROFILE

OBLITERATE

NAD 83 /95

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FOR
DIVISION OF HIGHWAYS

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

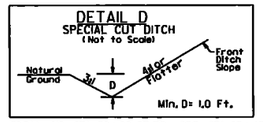
8/17/99

REVISIONS

-RPB-

PIs Sta 11+33.36	PI Sta 16+87.54	PIs Sta 22+16.28
θs = 3° 22' 13.2"	Δ = 32° 00' 15.8" (LT)	θs = 3° 22' 13.2"
Ls = 200.00'	D = 3° 22' 13.2"	Ls = 200.00'
LT = 133.36'	L = 949.59'	LT = 133.36'
ST = 66.69'	T = 487.54'	ST = 66.69'
	R = 1,700.00'	
	Se = 0.06 ft/ft	

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)



FROM -Y3- STA. 53+00 RT TO -RPC- STA. 15+45 RT

NAD 83/95

WEYERHAEUSER COMPANY
DB 414 PG 494
(1)

-TI- 108 PINC 7+94.10
ELEV=28.02' NAIL SET

S 28° 07' 21.7" E

EXISTING R/W

BEGIN CONSTRUCTION
-Y3- Sta.43+70.00

S 50° 34' 49.7" E

-BY- 42 PINC 22+19.45 =
-BYRPC- 89 POT 5+00.00
-Y3- 45+53.37 14.16' LT
-TI- 109 PINC 12+47.77

300' TAPER

580' ACCELERATION LANE

-RPB- ST Sta. 10+00.00 =
-Y3- Sta.53+00.00 (72.60' LT)

-RPB- SCSta. 12+00.00
-BY- 43 PINC 30+50.03 =
-BYRPB- 84 POT 5+00.00
-Y3- 53+83.95 16.01' LT

18" RCP FES

4" FDPS

12'

24'

RETAIN

96" MED.

310.00'

S 14° 48' 22.2" E

-Y3-

S 70° 57' 46.5" E

US 70 WBL 32° BST

US 70 EBL 32° BST

-RPB-

-RPC-

57.14' TYP.

-TI- 111 PINC 15+49.74
ELEV= 27.65' NAIL SET

340' DECELERATION LANE

S 40° 34' 35.1" E

FOR GORE DIMENSIONS SEE STD.225.03

26 TONS CL B RIPRAP W/50 SY FIL FAB

SPECIAL CUT DITCH SEE DETAIL D

-RPC- +60.00
EXIST R/W

-RPC- +65.00
130' RT

TDE

-RPC- +80.00
100' & 114' RT

-RPC- EXIST. R/W
100' RT
BEGIN 48" WW FENCE
TIE TO EXIST.

48" WW FENCE

-TI- 110 PINC 14+30.35
ELEV=28.33' NAIL SET

S 32° 50' 08.3" E

-TI- 112 POT 17+61.91
ELEV=27.95' NAIL SET

-RPC- ST Sta. 10+00.00 =
-Y3- Sta.50+10.00 (71.69' RT)

-RPC- SCSta. 12+00.00

WEYERHAEUSER COMPANY
DB 414 PG 494
(1)

-BYRPC- 90 PINC 14+85.46 =
-RPC- 15+26.61 28.10' RT

-RPC-

PIs Sta 11+33.36	PI Sta 15+71.59	PIs Sta 19+96.28
θs = 3° 40' 22.1"	Δ = 26° 47' 46.8" (RT)	θs = 3° 40' 22.1"
Ls = 200.00'	D = 3° 40' 22.1"	Ls = 200.00'
LT = 133.36'	L = 729.59'	LT = 133.36'
ST = 66.69'	T = 371.59'	ST = 66.69'
	R = 1,560.00'	
	Se = 0.06 ft/ft	

MATCHLINE -Y3- STA. 55+50 SEE SHEET 4

SEE SHT.27 FOR -RPB- PROFILE
SEE SHT.28 FOR -RPC- PROFILE

PLANS PREPARED BY :
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FOR
DIVISION OF HIGHWAYS

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

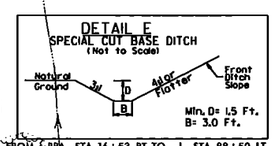
REVISIONS

MATCHLINE -Y3- STA. 83+50 SEE SHEET 4

-RPA-

PIs Sta 14+33.36	PI Sta 18+32.77	PIs Sta 22+22.40
Θs = 3° 40' 22.5"	Δ = 24° 04' 58.8" (RT)	Θs = 3° 40' 22.5"
Ls = 200.00'	D = 3° 40' 22.5"	Ls = 200.00'
LT = 133.36'	L = 655.71'	LT = 133.36'
ST = 66.69'	T = 332.77'	ST = 66.69'
	R = 1,560.00'	
	Se = 0.06 ft/ft	

DETAIL E
SPECIAL CUT BASE DITCH
(Not to Scale)



FROM -RPA- STA. 16+53 RT TO -L- STA. 88+50 LT

NAD 83/95

WEYERHAEUSER COMPANY
DB 414 PG 494
(1)

-RPA- SCSta. 15+00.00

-BYRPA- 80 PINC 13+03.57 =
-RPA- 14+96.45 17.57' RT

-RPA- TSSta. 13+00.00

-RPA- POTSta. 10+00.00=
-Y3- POTSta. 90+00.00 (72.83' LT)
Δ = 2° 18' 0.5"

-BY- 48 PINC 69+70.62 =
-BYRPA- 79 POT 5+00.00
-Y3- 93+03.64 16.76' LT

-RPA- +00.00
100' RT

-RPA- +00.00
EXIST. R/W
BEGIN 48" WW FENCE
TIE TO EXIST.

48" WW FENCE

(CHORD)

SP. CUT BASE DITCH
SEE DETAIL E

FOR GORE DIMENSIONS
SEE STD.225.03

-RPA- N 68° 39' 46.0" W

-Y3- S 70° 57' 46.5" E

RETAIN

REMOVE

EXISTING R/W

END CONSTRUCTION
-Y3- Sta. 93+00.00

US 70 WBL 32' BST

US 70 EBL 32' BST

4" FDPS

24'

96' MED.

370.00'

-RPD- EXIST R/W
100' RT
END 48" WW FENCE
TIE TO EXIST.

-BY- 47 PINC 61+57.04 =
-Y3- 84+90.06 18.62' LT

-RPD- SCSta. 12+00.00
(FUTURE)

-RPD- STSta. 10+00.00=
-Y3- POTSta. 86+50.00 (72.38' RT)
(FUTURE)

WEYERHAEUSER COMPANY
DB 414 PG 494
(1)

FUTURE -RPD-

PIs Sta 11+33.35	PI Sta 17+06.49	PIs Sta 22+54.94
Θs = 3° 07' 51.3"	Δ = 30° 56' 28.6" (LT)	Θs = 3° 07' 51.3"
Ls = 200.00'	D = 3° 07' 51.3"	Ls = 200.00'
LT = 133.35'	L = 988.25'	LT = 133.35'
ST = 66.69'	T = 506.49'	ST = 66.69'
	R = 1,830.00'	
	Se = 0.06 ft/ft	

OBLITERATE

25BKD
15BKD
25FD
CONC

SEE SHT.26 FOR -RPA- PROFILE
SEE SHT.29 FOR FUTURE -RPD- PROFILE

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FOR
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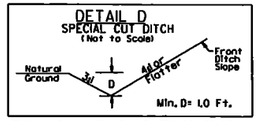
PROJECT REFERENCE NO.	SHEET NO.
R-4463B	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)



FROM -Y8- STA. 22+50 TO STA. 25+00 LT
FROM -Y8- STA. 23+00 TO STA. 25+00 RT

-Y8-
PI 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

WASHINGTON FORK INVESTMENT, LLC
DB 2342 PG 0676
3A

NAD 83/95

-BY5- 95 PINC 12+24.17 =
-Y8- 17+26.05 13.35' RT

-Y4- POT Sta. 16+50.00 =
-Y8- POT Sta. 25+21.71

-Y8- +75.11
60' LT

-Y8- +00.00
50' LT
BEGIN 48" WW FENCE

48" W.W. FENCE

-Y8- +80.00
50' LT

SPECIAL CUT DITCH
SEE DETAIL D

-Y8-
S 29° 52' 58.0" E

PROP. 5'-0" MONOLITHIC CONC. ISLAND

-Y4- +00.00
EXIST R/W

R=180'-60'-180'
OFFSET = 6'

-Y8- +80.00
50' RT

-Y8- +75.11
60' RT

-BY0- +00.00
50' RT
END 48" WW FENCE

-Y8- PT Sta. 14+75.11

MATCHLINE -Y8- STA. 14+00 SEE SHEET 10

WASHINGTON FORK INVESTMENT, LLC
DB 2342 PG 0676
3A

-BY5- 96 PINC 19+44.93 =
-Y8- 24+46.84 11.97' RT

-Y4- +80.00
EXIST R/W

-Y8- POT Sta. 25+11.10
END CONSTRUCTION

-BY5- 97 POT 20+42.97 =
-BY4- 76 PINC 25+22.65
-Y4- 15+59.04 16.82' LT

METAL SPINNING CORP.
DB 1293 PG 926
3

BSH HOME APPLIANCES CORP.
DB 1805 PG 431

AREA OF CONTAMINATED SOIL

SEE SHT. 32 FOR -Y8- PROFILE

PLANS PREPARED BY :
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FOR
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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

8/17/99

March 26,2001: -Y5- monument at 15+10.50' Rt.was previously labeled 60' Rt.
April 30,2001: Increased PUE on Parcel Numbers 15,16,17,18,and 19.

MATCHLINE -Y5- STA. 21+50 SEE SHEET 11

BEGIN CONSTRUCTION
-Y5- POC Sta. 15+35.00

PT Sta. 16+91.78

-BY2- 58 POT 5+00.00
-Y5- 10+39.96 80.65' LT

-Y5-
PI Sta 13+45.90
Δ = 0°55'18.4" (LT)
D = 0°07'59.7"
L = 691.78'
T = 345.90'
R = 43,000.00'
Se = NC

PC Sta. 10+00.00

-BY2- 59 PINC 12+38.15 =
-Y5- 17+77.08 19.16' RT

JOE L. CLARK, et ux
DB 668 PG 294

KENNETH A. ALLEN
DB 974 PG 940

MD STATE INVESTMENT CORP.
DB 605 PG 452

STATE STREET BANK & TRUST CO.
DB 1758 PG 733

MARY FIELDS
DB 1585 PG 601

BRYANT FIELDS HEIRS
DB 850 PG 817

HARRY E. GERHARD, et ux
DB 1538 PG 870

JOE L. CLARK, et ux
DB 858 PG 474

DONALD K. WEBB
DB 647 PG 973

RODNEY C. ALLEN
DB 1575 PG 138

WEBB
DB 1078 PG 761

DONALD K. WEBB, et ux
DB 1121 PG 978

FRED WALLACE JR., et ux
DB 1386 PG 964

JEFFRIE W. GARDNER, et ux
DB 852 PG 253
MB 9 PG 14

JOSEPH E. JONES, et ux
DB 884 PG 59
MB 9 PG 14

ORAL ROBERT TAYLOR, et ux
MB 9 PG 14
DB 1627 PG 155

JAMES ROBERT CIVILS, et ux
DB 985 PG 415
MB 9 PG 14

LINWARD E. BROWN & EDWIN R. BROWN
DB 1879 PG 808
MB 1 PG 17

CITY OF NEW BERN
DB 1941 PG 521
MB 1 PG 17

GEORGIA ANN WALLACE
DB 1386 PG 967

JAMES ROBERT CIVILS, et ux
DB 765 PG 192
MB 9 PG 14

REBA H. GRIFFIN
DB 1657 PG 69

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)

Natural Ground — 3H — D — 4H or Flatter — Front Ditch Slope

Min. D= 1.0 Ft.

FROM -Y5- STA. 15+07 TO STA. 21+50 LT
FROM -Y5- STA. 15+16 TO STA. 21+50 RT

SEE SHT.33 FOR -Y5- PROFILE

PLANS PREPARED BY :
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RALEIGH, NORTH CAROLINA 27609-3960
(919) 878-9560
FOR
DIVISION OF HIGHWAYS

05\21\07 11:07:43
c:\projects\y5rdy\R4463B_rdy_psh16.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

April 30, 2007: Added PUE for Parcel Numbers 24 and 25.

March 26, 2007: -Y5- monument 36+83/exist.r/w was previously labeled -Y5- exist r/w 50' Lt.

NAD 83/92

MATCHLINE -Y5- STA. 30+25 SEE SHEET 11

MATCHLINE -Y5- STA. 44+50 SEE SHEET 18

-DR2- POT Sta. 14+15.34

-DR2- PT Sta. 13+26.72
END CONSTRUCTION

-Y6- PC Sta. 11+29.72

-DR2- PRC Sta. 11+53.46

-DR2-
PI Sta 12+45.93
Δ = 3° 19' 41.4" (RT)
D = 1° 25' 56.6"
L = 232.35'
T = 116.21'
R = 4,000.00'

-Y6-
PI Sta 11+01.49
Δ = 34° 01' 28.9" (RT)
D = 22° 55' 05.9"
L = 148.46'
T = 76.49'
R = 250.00'

PI Sta 12+52.58
Δ = 35° 07' 28.9" (LT)
D = 22° 55' 05.9"
L = 153.26'
T = 79.12'
R = 250.00'

-Y6- POT Sta. 10+40.22=
-DR2- POC Sta. 11+57.73

-DR2- PC Sta. 10+25.00

-DR2- POT Sta. 10+00.00=
-Y5- POC Sta. 31+95.54

-BY2- 62 POT 30+33.23
-BY3- 68 PINC 39+96.92 =
-Y5- 35+68.65 0.56' LT
NCDOT GPS R4463B-3

-BY2- 61 PINC 25+52.59 =
-Y5- 30+86.50 32.28' RT

-BY3- 69 PINC 47+74.85 =
-Y5- 43+45.79 41.72' RT

PC Sta. 33+42.16

PT Sta. 38+72.16

BEG. PROP. 2'-6" CONC. C&G
-Y5- STA. 32+02.45

END PROP. 2'-6" CONC. C&G
-Y5- STA. 31+64.61

END PROP. 2'-6" CONC. C&G AND PROPOSED PAVING
-Y5- STA. 43+50.00 LT. & RT.

McCOTTER INVESTMENT CO-RAY
DB 1902 PG 688
PC G SLIDE 141-B

RMICo., LLC
DB 2142 PG 713
PC G SLIDE 141-B

ALEATHER P. PIGGOTT, et al
DB 2268 PG 734
PC G SLIDE 141-B

HAROLD T. FARROW
DB 2226 PG 251
PC G SLIDE 141-B

PATRICIA T. TRIPP & TERESA TRIPP
DB 1656 PG 196

RICHARD F. ORDIWAY
DB 1205 PG 826

RICHARD F. ORDIWAY
DB 836 PG 820

CT&T CO.
DB 1108 PG 990

WEST OF NEW BERN VOL. FIRE DEPT. No. 1
DB 697 PG 210

LEAMON C. PACE SR., et ux
DB 1202 PG 209

CORNELIUS FARROW, et ux
DB 938 PG 771

EBBIE HOWARD JR.
DB 1848 PG 164

NORMA JEAN TAYLOR JOLLY, et vir
DB 1506 PG 135

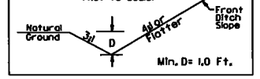
ELLEN TAYLOR ERICHSEN, et vir
DB 1506 PG 128
MB 8 PG 30

WILBERT A. JACKSON, et al
DB 1366 PG 677
MB 1PG 38

MARGARET D. BENEDETTO
DB 2202 PG 297
PC G SLIDE 141-B

WASHINGTON FORK INVESTORS, LLC
DB 2342 PG 0676

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)



FROM -Y6- STA. 10+50 TO STA. 11+25 RT
FROM -Y6- STA. 11+00 TO STA. 12+00 LT

OBLITERATE

AREA OF CONTAMINATED SOIL

SEE SHT. 34 FOR -DR2- PROFILE

SEE SHTS. 33 & 34 FOR -Y5- PROFILE

-Y5-

PI Sta 28+82.03
Δ = 18° 34' 11.0" (RT)
D = 2° 00' 00.0"
L = 928.49'
T = 468.35'
R = 2,864.79'
Se = 0.025 ft/ft

PI Sta 36+07.27
Δ = 4° 02' 56.0" (RT)
D = 0° 45' 50.2"
L = 530.00'
T = 265.11'
R = 7,500.00'
Se = 0.02 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

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rdoakley

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

MATCHLINE -Y5- STA. 44+50 SEE SHEET 17

-BY3- 70 PINC 53+29.99 =
-BY4- 73 POT 5+00.00
-Y5- 49+00.66 37.84' RT
NCDOT GPS R4463B-4

DAVID H. FRESHWATER & FREDERICK H. HOWDY
DB 899 PG 802

TIDEWATER DENTAL PROPERTIES
DB 1330 PG 36

EBBIE HOWARD JR.
DB 1703 PG 749

COLONIAL SQUARE ASSOC., INC.
DB 1102 PG 718
PC D SLIDE 558

BCSH INVESTMENTS PARTNERSHIP
DB 802 PG 755

BCSH INVESTMENTS PARTNERSHIP
DB 802 PG 755

CATHERINE S. ROGERS
DB 1187 PG 264
MB 1PG 38

RCF NC PROPERTIES, LLC
DB 2263 PG 591

SOS EQUITIES, LLC
DB 1611 PG 859
MB 1PG 38

WASHINGTON FORK INVESTORS, LLC
DB 2342 PG 0676

BSH HOME APPLIANCES CORP.
DB 1805 PG 441

CITY OF NEW BERN

-Y5- POT Sta. 47+74.21

-Y5- POT Sta. 48+46.16 =
-Y4- POT Sta. 36+00.00

POT Sta. 59+00.00

END CONSTRUCTION
-Y5- STA. 58+65.00

EXISTING
2- 7' X 6' RCBC

-BY4- 74 PINC 9+70.63 =
-Y4- 31+11.00 26.70' LT

-BY3- 71 PINC 59+21.86 =
-Y5- 54+92.52 34.44' RT

-Y5- S 40° 38' 21.0" E

S 41° 02' 45.0" E

NAD 83 / 95

SEE SHT. 34 FOR -Y5- PROFILE

PLANS PREPARED BY :
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(919) 878-9560
FOR
DIVISION OF HIGHWAYS

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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	19
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-L-

PI = 122+00.00
EL = 36.62'
VC = 200'
K = 200

PI = 127+25.00
EL = 34.00'
VC = 480'
K = 137

PROPOSED GRADE

BEGIN GRADE
-L- POC Sta.128+97.00
EL 39.32

FUTURE

(+)0.5000%

(-)0.5000%

(-)0.5000%

(+)3.0000%

EXISTING GROUND

50
40
30
20
10

116+00 117+00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00

PI = 137+05.00
EL = 63.40'
VC = 1,030'
K = 172

(+)3.0000%

(-)3.0000%

(+)0.69% CL

(-)0.30% CL

-L- POT Sta.137+24.22 =
-Y3- PT Sta.68+98.49

PROPOSED GRADE

BEG. MED. CUT DITCH
-L- STA. 133+50.00 CL
EL. 49.08

END MED. CUT DITCH
-L- STA. 135+00.00 CL
EL. 50.11

42" RCP
CLASS IV
METHOD B

-Y3-

70

BEG. MED. CUT DITCH
-L- STA. 138+50.00 CL
EL. 51.95

36" RCP
CLASS IV
METHOD B

END MED. CUT DITCH
-L- STA. 140+00.00 CL
EL. 51.50

EXISTING GROUND

60
50
40
30
20

130+00 131+00 132+00 133+00 134+00 135+00 136+00 137+00 138+00 139+00 140+00 141+00 142+00 143+00

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rdyuser2

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	20
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

—L—

PI = 148+00.00
EL = 30.55'
VC = 450'
K = 136

PROPOSED GRADE

(-)3.0000%

(+)0.3000%

(+)0.3000%

EXISTING GROUND

(+)0.29% RT

BEG. LAT. BASE DITCH
-L- STA. 145+40.00 RT
EL. 23.79

END LAT. BASE DITCH
-L- STA. 146+44.00 RT
EL. 23.49

30" RCP

30" RCP

50
40
30
20
10

143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00 151+00 152+00 153+00 154+00 155+00 156+00

PI = 157+50.00
EL = 33.40'
VC = 200'
K = 333

(+)0.3000%

(-)0.3000%

PROPOSED GRADE

(+)0.22% CL

(+)0.57% CL

(-)0.23% CL

(-)0.54% CL

(+)0.20% CL

EXISTING GROUND

BEG. MED. CUT DITCH
-L- STA. 156+50.00 CL
EL. 30.07

PI -L- STA. 158+50.00 CL
EL. 31.20

PI -L- STA. 159+00.00 CL
EL. 31.31

PI -L- STA. 160+50.00 CL
EL. 30.97

24" RCP

PI -L- STA. 161+68.00 CL
EL. 30.33

END MED. CUT DITCH
-L- STA. 162+95.00 CL
EL. 30.59

BEG. LAT. BASE DITCH
-L- STA. 163+39.00 LT
EL. 21.50

POTENTIAL ACCESS POINT

BEG. MED. CUT DITCH
-L- STA. 165+05.00 CL
EL. 28.97

(+)0.20% CL

(+)0.62% LT

PI -L- STA. 166+06.00 CL
EL. 28.77

END LAT. BASE DITCH
-L- STA. 166+88.00 LT
EL. 23.65

PI = 167+35.00
EL = 30.44'
VC = 200'
K = 330

(-)0.3000%

(+)0.3055%

(+)0.20% CL

PI -L- STA. 168+00.00 CL
EL. 29.16

(+)0.57% CL

PI -L- STA. 169+00.00 CL
EL. 29.73

(+)0.20% CL

50
40
30
20
10

157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00 166+00 167+00 168+00 169+00 170+00

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roadway

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	21
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-L-

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

PI = 177+58.00
EL = 29.99'
VC = 475'
K = 140

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

BEG. MED. CUT DITCH
-L- STA. 174+50.00 CL
EL. 28.29

PT -L- STA. 175+02.00 CL
EL. 27.65

END MED. CUT DITCH
-L- STA. 176+50.00 CL
EL. 28.10

PROPOSED GRADE

(+)0.3055%

(-)0.3983%

(+)0.20% CL

(-)1.23% CL

(+)0.30% CL

(+)3.0000%

(-)0.3983%

EXISTING GROUND

WETLAND

18" RCP

24" RCP

24" RCP

60
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

END MED. CUT DITCH
-L- STA. 189+50.00 CL
EL. 57.33

(+)3.0000%

(-)3.0000%

BEG. MED. CUT DITCH
-L- STA. 191+00.00 CL
EL. 57.06

PI = 190+40.00
EL = 68.45'
VC = 1,010'
K = 168

PROPOSED GRADE

(+)0.30% CL

(-)0.30% CL

(-)2.73% CL

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

BEG. MED. CUT DITCH
-L- STA. 188+80.00 CL
EL. 56.87

CONC. LINED DITCH
-L- STA. 189+20.00 LT
L=145'

CONC. LINED DITCH
-L- STA. 190+45.00 LT
L=50'

CONC. LINED DITCH
-L- STA. 190+40.00 RT
L=100'

-Y1-

TAIL DITCH
-L- STA. 190+45.00 LT
S=33.76%, L=60'
BEG. EL. 41.50
END EL. 21.25
DDE NA

TAIL DITCH
-L- STA. 190+40.00 RT
S=34.00%, L=50'
BEG. EL. 41.00
END EL. 24.00
PI
S=0.22%, L=45'
BEG. EL. 24.00
END EL. 23.90
DDE=5CY

CONC. LINED DITCH
-L- STA. 191+60.00 RT
L=145'

PI -L- STA. 193+00.00 CL
EL. 56.46

END MED. CUT DITCH
-L- STA. 193+50.00 CL
EL. 55.10

BEG. LAT. V DITCH
-L- STA. 185+10.00 LT
EL. 22.64

END LAT. V DITCH
-L- STA. 188+15.00 LT
EL. 23.25

BEG. LAT. V DITCH
STA. 190+46.00 RT
EL. 24.00

END LAT. V DITCH
-L- STA. 190+75.00 LT
EL. 20.29

END LAT. V DITCH
STA. 190+77.00 RT
EL. 23.90

BEG. LAT. BASE DITCH
STA. 192+65.00 RT
EL. 24.30

END LAT. BASE DITCH
STA. 194+05.00 RT
EL. 20.40

EXISTING GROUND

(+)0.20% LT

(-)3.97% LT
ACTUAL LENGTH=140'

(-)0.10% RT
ACTUAL LENGTH=100'

(-)2.79% RT

18" RCP
CL IV

24" RCP
CL IV
METHOD B

BEG. LAT. V DITCH
-L- STA. 190+38.00 LT
EL. 24.75

60
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

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cshipman

5/26/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	22
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

—L—

PI = 202+25.00
EL = 32.90'
VC = 370'
K = 137

PROPOSED GRADE

(-)3.0000%

(-)0.3000%

EXISTING GROUND

50
40
30
20
10

197+00 198+00 199+00 200+00 201+00 202+00 203+00 204+00 205+00 206+00 207+00 208+00 209+00 210+00

PI = 214+00.00
EL = 29.37'
VC = 200'
K = 238

BEG. MED. CUT DITCH
-L- STA. 213+00.00 GL
EL. 26.75

PT -L- STA. 214+82.00 GL
EL. 26.20
END MED. CUT DITCH
-L- STA. 215+00.00 GL
EL. 26.99

PROPOSED GRADE

(-)0.3000%

(+)0.5413%

(-)0.30% GL

(+)4.41% GL

30" RCP

EXISTING GROUND

50
40
30
20
10

211+00 212+00 213+00 214+00 215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00 224+00

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5/28/99

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

[redacted]

-Y8-

-L- POC Sta. 225+75.00 =
-Y8- PT Sta. 10+00.00

PI = 225+70.00
EL = 35.71'
VC = 400'
K = 383

(+)0.5413%

(-)0.5041%

PROPOSED GRADE

WETLAND

24" RCP

BEG. MED. CUT DITCH
-L- STA. 231+50.00 CL
EL. 29.87

PI -L- STA. 232+50.00 CL
EL. 29.38

END MED. CUT DITCH
-L- STA. 234+00.00 CL
EL. 29.81 LT & 29.79 RT

(-)0.49% CL

(+)0.29% CL LT

(+)0.27% CL RT

EXISTING GROUND

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

-L-

50 40 30 20 10

224+00 225+00 226+00 227+00 228+00 229+00 230+00 231+00 232+00 233+00 234+00 235+00 236+00 237+00

-Y5-

43
55

V = 50 mph
Ks = 96
Kcr = 84
Lmin = 150'

-L- POC Sta. 241+97.22 =
-Y5- POC Sta. 251+61.81

PI = 240+00.00
EL = 28.50'
VC = 301'
K = 100

PROPOSED GRADE

(+)2.5000%

(-)0.5041%

(+)2.5000%

EXISTING GROUND

END GRADE
-L- Sta. 242+30.00 LT EL. 34.25' =
-NBL- Sta. 242+30.00 LA 123' LT EL. 34.25
-SBL- Sta. 242+30.00 LA 123' RT EL. 34.02'

PI = 243+70.00
EL = 37.52'
VC = 280'
K = 62

PROPOSED GRADE

(+)2.5000%

(-)12.0000%

EXISTING GROUND

PI = 247+10.00
EL = 30.72'
VC = 190'
K = 78

V = 40 mph
Ks = 64
Kcr = 44
Lmin = 120'

PI = 248+65.00
EL = 31.42'
VC = 120'
K = 160

(-)12.0000%

(+)0.4500%

(+)0.4500%

(-)0.3000%

BEG. LAT. BASE DITCH
-L- STA. 247+40.00 RT
EL. 23.88

PI -L- STA. 248+88.00 RT
EL. 22.60

(-)0.58% RT

(-)0.05% RT

-SBL-

-NBL-

PI = 243+70.00
EL = 37.75'
VC = 280'
K = 56

PROPOSED GRADE

(+)2.5000%

(-)12.5000%

EXISTING GROUND

PI = 246+22.00
EL = 31.45'
VC = 200'
K = 65

PI = 247+82.00
EL = 32.35'
VC = 120'
K = 103

PI = 249+02.00
EL = 31.63'
VC = 120'
K = 400

(+)0.5619%

(-)12.5000%

(+)0.5619%

(-)0.6000%

(-)0.6000%

(-)0.3600%

END GRADE
-NBL- Sta. 249+65.02 (16' RT) LB EL. 31.44'
-SBL- Sta. 249+27.12 (16' RT) LB EL. 31.23'
-L- Sta. 249+47.26 LA EL. 31.38'

END LAT. V DITCH
BEG. SPECIAL CUT DITCH
-L- STA. 248+00.00 LT
EL. 23.75

END SPECIAL CUT DITCH
-L- STA. 249+67.00 LT
EL. 25.74

BEG. LAT. V DITCH
-L- STA. 246+00.00 LT
EL. 24.35

(-)0.30% LT

(+)1.19% LT

24" RCP

50 40 30 20 10

238+00 239+00 240+00 241+00 242+00 242+00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00

05\21\07 MHQ20
P:\roadway\proj\R4463B_rdy_prf123.dgn

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	24
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

V = 40 mph
Ks = 64
Kcr = 44
Lmin = 120'

-L-

PI = 250+08.00
EL = 31.20'
VC = 120'
K = 200

PI = 252+50.00
EL = 31.92'
VC = 260'
K = 320

PI = 254+40.00
EL = 30.95'
VC = 120'
K = 331

END GRADE
-LT- Sta.255+00.00 EL. 30.86

END GRADE
-NBL- Sta.249+65.02 (6'-LT) LB EL. 31.44'
-SBL- Sta.249+27.42 (6'-RT) LB EL. 31.23'
-L- Sta.249+47.26 LA EL. 31.38'

PROPOSED GRADE

(+)0.300%
(-)0.513%
(-)0.300%
(+)0.300%
(-)0.513%
(-)0.150%

EXISTING GROUND

(-)0.08% RT

END LAT. BASE DITCH
-LT- STA. 253+00.00 RT
EL. 22.40

50
40
30
20
10

251+00 250+00 251+00 252+00 253+00 254+00 255+00 256+00 257+00 258+00 259+00 260+00

-Y3-

BEG. SP. CUT DITCH
-Y3- STA. 56+13.00.00 LT
EL. 21.64

SP. CUT DITCH
-Y3- STA. 57+00.00 LT
CONT. AT -RPB- 14+00.00 LT
EL. 23.42

EXISTING GROUND

(+)0.39% RT

SP. CUT DITCH
-Y3- STA. 53+97.00 RT
CONT. AT -RPC- STA. 13+89.00 RT
EL. 22.15

(+)2.05% LT

BEG. SP. CUT DITCH
-Y3- STA. 53+00.00 RT
EL. 21.77

50
40
30
20
10

53+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00

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mwoody

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	25
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
[redacted]	

-Y3-

40
30
20
10

EXISTING GROUND

67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00

SP. CUT BASE DITCH
-Y3- STA. 84+00 LT.
CONT. AT RPA- 16+00.00 RT
EL. 23.36

(+) 0.2% LT

END SP. CUT BASE DITCH
-Y3- STA. 88+50.00 LT
EL. 23.90

81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00 90+00 91+00 92+00 93+00 94+00 95+00

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r:\roadway\proj\R4463B_rdy_pf125.dgn
rwhaley

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	26
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-RPA-

V = 50 mph
Ks = 96
Kcr = 84
Lmin = 200'

PI = 11+25.00
EL = 31.00'
K = 1053
VC = 200'

PI = 14+50.00
EL = 30.03'
K = 333
VC = 200'

PI = 18+70.00
EL = 31.29'
K = 333
VC = 200'

PI = 24+10.00
EL = 29.67'
K = 179
VC = 500'

BEGIN GRADE
-RPA- Sta.10+00.00 EL 31.14
-Y3- Sta.90+00.00 (72.63' LT)

(-)0.1100% (-)0.3000% (-)0.3600% (+)0.3000% PROPOSED GRADE (+)0.3000% (-)0.3000% (+)0.3000%

(-)0.12% RT

(-)3.55% RT

(+)2.71% RT

EXISTING GROUND

18" RCP

36" RCP

SP. CUT BASE DITCH
-RPA- STA. 16+00 RT
CONT. AT -Y3- 84+00 LT
EL. 23.36

END SP. CUT BASE DITCH
-RPA- STA. 16+76.00 RT
EL. 23.26

BEG. SP. CUT DITCH
-RPA- STA. 19+50.00 RT
EL. 26.44

PI -RPA- STA. 20+66.00 RT
EL. 22.32

END SP. CUT DITCH
-RPA- STA. 22+90.00 RT
EL. 25.96

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

50 40 30 20 10

PI = 27+75.00
EL = 38.79'
K = 161
VC = 200'

END GRADE
-RPA- Sta.29+93.04 EL 41.54
-L- Sta.144+13.44 (47' RT.)

PI = 24+10.00
EL = 29.67'
K = 179
VC = 500'

(+)2.5000% (+)2.5000% (+)1.2691% (+)2.5% PROPOSED GRADE

EXISTING GROUND

18" RCP

24+00 25+00 26+00 27+00 28+00 29+00 30+00

50 40 30 20 10

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mwooley

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-RPB-

V = 50 mph
Ks = 96
Kcr = 84
Lmin = 200'

PI = 11+80.00
EL = 31.16'
VC = 320'
K = 640

BEGIN GRADE
-RPB- Sta.10+00.00 EL. 31.16
-Y3- Sta.5+50.00 (74.10' LT)

PI = 14+40.00
EL = 29.86'
VC = 200'
K = 250

(+)0.0000%

(-)0.5000%

(-)0.5000%

(+)0.3000%

(+)2.05%

PROPOSED GRADE

EXISTING GROUND

42" RCP

SF. CUT DITCH
-RPB- STA. 14+00.00 LT
CONT. AT -Y3- 57+00.00 LT
EL. 23.42

END SF. CUT DITCH
-RPB- STA. 15+00.00 LT
EL. 25.47

PI = 25+70.00
EL = 33.25'
VC = 500'
K = 230

END GRADE
-RPB- Sta.28+90.99 EL. 41.18
-L- Sta.144+06.43 (47' LT)

(+)2.4705%

(+)2.5%

PROPOSED GRADE

EXISTING GROUND

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

24+00 25+00 26+00 27+00 28+00 29+00 30+00

10 20 30 40 50

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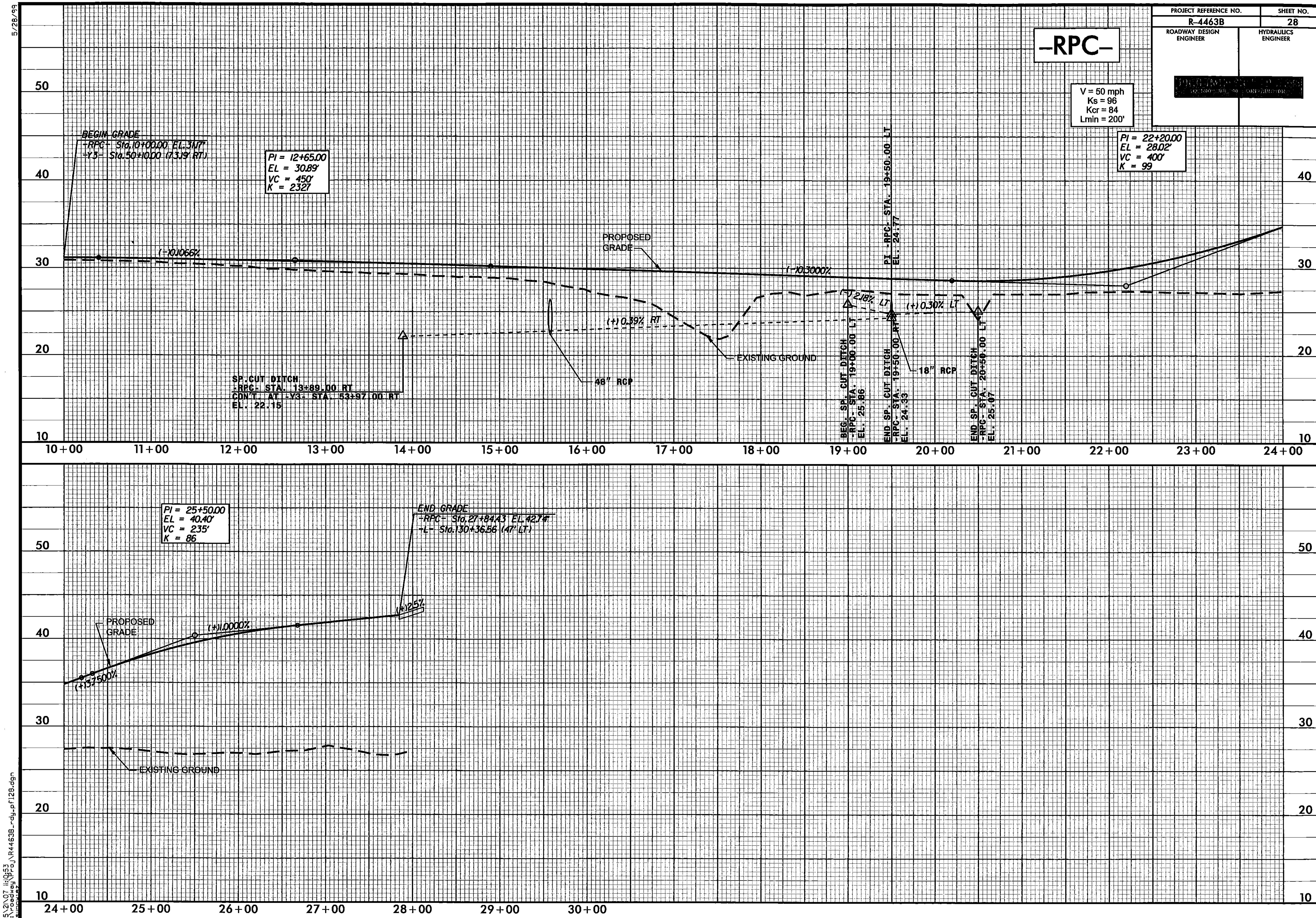
dsimpkins

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	28

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

[redacted]



5/26/99

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	29
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FUTURE –RPD–

V = 50 mph
Ks = 96
Kcr = 84
Lmin = 200'

PI = 12+20.00
EL = 31.06'
VC = 300'
K = 699

PI = 16+35.00
EL = 29.40'
VC = 500'
K = 476

BEGIN GRADE
-RPD- Sta.10+00.00 EL 31.60'
-Y3- Sta.86+50.00 (72.38' RT)

(+)0.0289%
(-)0.4000%
(-)0.4000%
(+)0.6500%
FUTURE
EXISTING GROUND

PI = 28+00.00
EL = 36.98'
VC = 450'
K = 243

END GRADE
-RPD- Sta.30+39.043 EL 42.95'
-L- Sta.130+43.57 (48' RT)

(+)2.5%
(+)0.6500%
(+)2.5000%
FUTURE
EXISTING GROUND

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00
24+00 25+00 26+00 27+00 28+00 29+00 30+00
10 20 30 40 50

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	30
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FUTURE -LPA-

V = 30 mph
Ks = 37
Kcr = 19
Lmin = 90'

PI = 11+00.00
EL = 31.14'
VC = 200'
K = 339

PI = 15+90.00
EL = 27.71'
VC = 780'
K = 173

PI = 21+80.00
EL = 50.13'
VC = 130'
K = 71

BEGIN GRADE
-LPA- Sta. 10+00.00 EL. 31.25
-Y3- Sta. 71+94.33 (74.10' RT.)

(-)0.1100%
(-)0.7000%
(-)0.7000%
(+)3.8000%
(+)3.8000%
(+)1.9740%

PROPOSED GRADE

END GRADE
-LPA- Sta. 22+65.11 EL. 51.81
-L- Sta. 140+39.45 (41' RT.)

EXISTING GROUND

60 50 40 30 20

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00

-LPC-

V = 30 mph
Ks = 37
Kcr = 19
Lmin = 90'

PI = 10+90.00
EL. = 31.15'
VC = 140'
K = 178

PI = 16+06.00
EL = 27.28'
VC = 720'
K = 152

PI = 22+05.00
EL = 51.12'
VC = 195'
K = 82

BEGIN GRADE
-LPC- Sta. 10+00.00 EL. 31.12
-Y3- Sta. 64+86.81 (72.80' RT.)

(+)0.0368%
(-)0.7500%
(-)0.7500%
(+)3.9800%
(+)3.9800%
(+)1.6000%

(+)2.75% RT
(+).47% RT

PROPOSED GRADE

END GRADE
-LPC- Sta. 23+11.12 EL. 52.82
-L- Sta. 134+27.13 (47' LT.)

42" RCP

BEG. SP. CUT DITCH
-LPC- STA. 12+90.00 RT
EL. 22.99

END SP. CUT DITCH
-LPC- STA. 14+00.00 RT
EL. 26.76

PI -LPC- STA. 13+62.00 RT
EL. 24.93

EXISTING GROUND

60 50 40 30 20

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00

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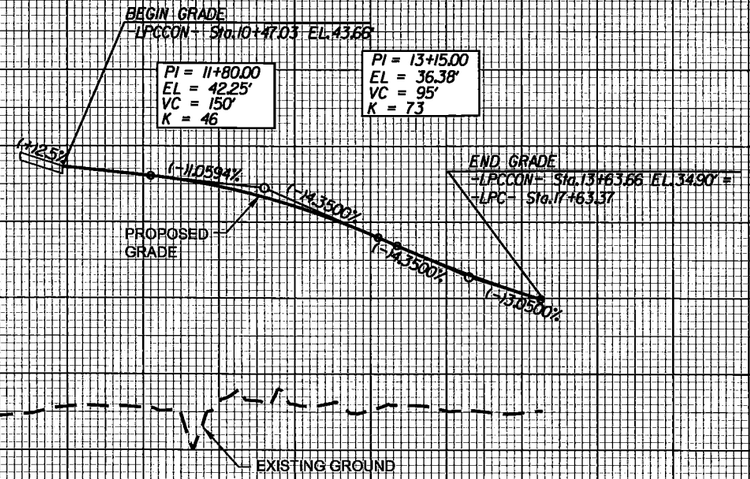
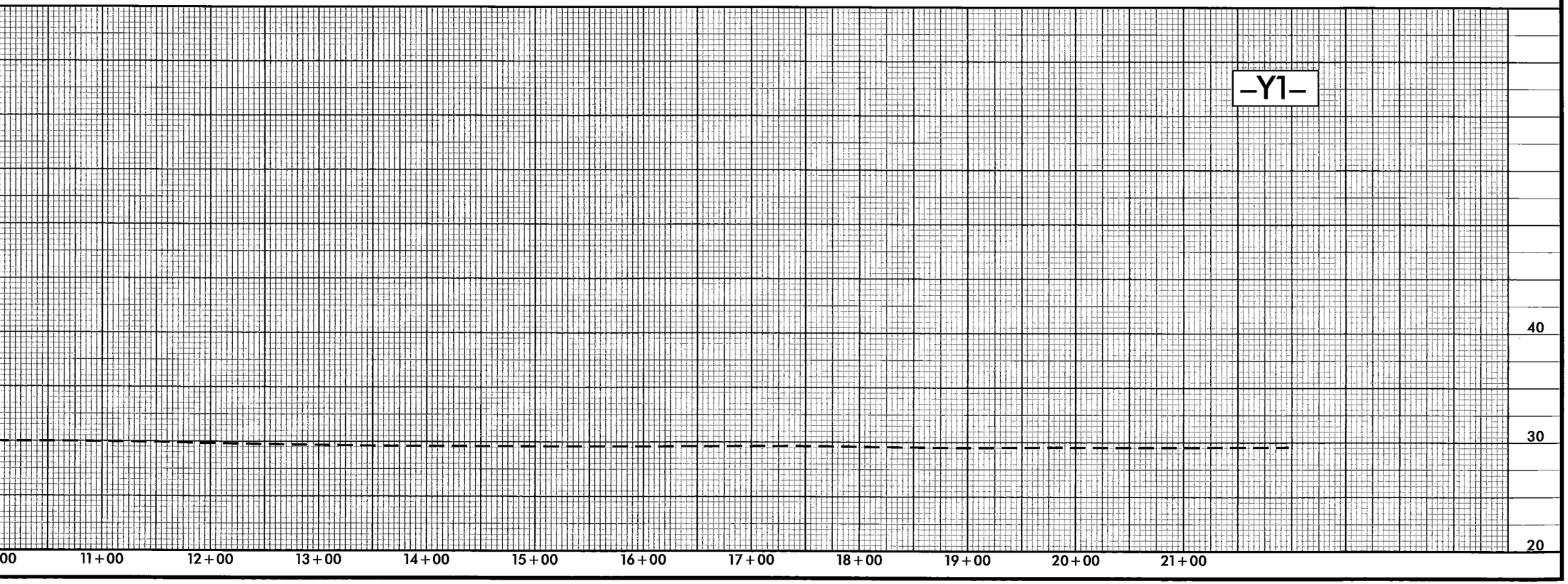
-LPCCON-

PROJECT REFERENCE NO.	SHEET NO.
R-4463B	31
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-Y1-



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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

–Y8–

V = 40 mph
Ks = 44
Kcr = 64
Lmin = 120'

BEGIN GRADE
-Y8- Sta. 10+47.18 EL. 36.39' =
-L- Sta. 225+79.06 (47' RT.)

PI = 11+30.00
EL = 38.05'
VC = 140'
K = 48

(+)5.0%
(+)12.0000%
(–)0.9216%

PROPOSED GRADE

18" RCP

EXISTING GROUND

PI = 21+00.00
EL = 29.11'
VC = 120'
K = 299

(–)0.9216%
(–)0.5197%

24" RCP EQUILIZER

(–)0.28% RT
(–)0.22% LT

BEG. SP. CUT DITCH -Y8- STA. 22+50.00 LT EL. 25.50

BEG. SP. CUT DITCH -Y8- STA. 23+00.00 RT EL. 25.50

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

50 40 30 20 10

END GRADE
-Y8- Sta. 25+11.10 EL. 26.97' =
-Y4- Sta. 216+50.00 (10.6' LT.)

END SP. CUT DITCH -Y8- STA. 25+00.00 RT EL. 24.94

PROPOSED GRADE

(–)0.5197%

(–)0.28% RT

(–)0.22% LT

EXISTING GROUND

END SP. CUT DITCH -Y8- STA. 25+00.00 LT EL. 24.95

24+00 25+00

40 30 20 10 0

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cgunnells

5/28/99

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

-Y5-

V = 50 mph
Ks = 96
Kcr = 84
Lmin = 150'

BEGIN GRADE
-Y5- Sta.15+35.00 EL 28.65'

PI = 17+75.00
EL = 28.41'
VC = 350'
K = 875

PI = 20+36.00
EL = 29.19'
VC = 120'
K = 191

PI = 22+62.00
EL = 28.45'
VC = 212'
K = 81*
*47 mph

BEG. SP. CUT DITCH
-Y5- STA. 15+16.00 RT
EL. 25.36

BEG. SP. CUT DITCH
-Y5- STA. 17+62.00 RT
EL. 24.10

END SP. CUT DITCH
-Y5- STA. 22+50.00 RT
EL. 25.15

PROPOSED GRADE

(+)0.3000%

(-)0.3292%

(+)2.3000%

EXISTING GROUND

(-)0.3000%

(+) 0.5% RT
(-) 0.52% LT

(+) 0.22% RT
(+) 0.26% LT

24" RCP

BEG. SP. CUT DITCH
-Y5- STA. 15+07.00 LT
EL. 24.93

PT. -Y6-
STA. 17+62.00 LT
EL. 23.82

END SP. CUT DITCH
-Y5- STA. 22+50.00 LT
EL. 25.11

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

10 20 30 40 50

V = 50 mph
Ks = 96
Kcr = 84
Lmin = 150'

-L-

PI = 25+61.51
EL = 35.33'
VC = 324'
K = 70*
*47 mph

-Y5- Sta. 25+61.51 =
-L- Sta. 24+97.22

PI = 28+10.02
EL = 29.62'
VC = 170'
K = 85

PI = 31+27.60
EL = 28.67'
VC = 265'
K = 331

PI = 34+32.37
EL = 30.19'
VC = 120'
K = 120

PI = 36+72.80
EL = 28.99'
VC = 120'
K = 120

(+)2.3000%

(-)2.3000%

(-)2.3000%

(-)0.3000%

PROPOSED GRADE

(-)0.3000%

(+)0.5000%

(-)0.5000%

EXISTING GROUND

(-)0.5000%

(+)0.5000%

24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00

10 20 30 40 50

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dsignerx

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	34
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y5-

PI = 38+50.00
EL = 29.87'
VC = 120'
K = 120

PI = 40+05.00
EL = 29.10'
VC = 100'
K = 125

PI = 41+56.10
EL = 29.55'
VC = 200'
K = 488

V = 50 mph
Ks = 96
Kcr = 84
Lmin = 150'

END GRADE
-Y5- Sta.43+50.00 EL.29.34'

(+)0.5000% (-)0.5000% (-)0.5000% (+)0.3000% (+)0.3000% (-)0.1100%

PROPOSED GRADE

EXISTING GROUND

40 30 20 10 0

38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00

-DR2-

BEGIN GRADE
-DR2- Sta.10+41.00 EL.30.11' =
-Y5- Sta.32+06.79 (40' LT)

END GRADE
-DR2- POT Sta.13+26.72 EL.28.30'

PI = 11+00.00
EL = 30.40'
VC = 100'
K = 67

PI = 12+75.00
EL = 28.65'
VC = 100'
K = 313

(-)2.500% (+)0.5000% (-)1.0000% (-)0.6808%

PROPOSED GRADE

EXISTING GROUND

40 30 20 10 0

10+00 11+00 12+00 13+00 14+00 15+00

-Y6-

BEGIN GRADE
-Y6- POT Sta.10+40.81 EL. 29.86' =
-DR2- POC Sta.11+09.99 (16' LT)

END GRADE
-Y6- POT Sta.11+00.00 EL 29.70'

PI = 10+75.00
EL = 29.63'
VC = 35'
K = 22

(+)2.0% (-)1.2822% (+)0.2800% (-)0.30% LT

PROPOSED GRADE (-)7.50% RT

EXISTING GROUND

BEG. SP. CUT DITCH -Y6- STA. 10+50.00 RT EL. 26.58

BEG. SP. CUT DITCH -Y6- STA. 11+00.00 LT EL. 26.67

END SP. CUT DITCH -Y6- STA. 11+25.00 RT EL. 25.45

END SP. CUT DITCH -Y6- STA. 12+00.00 LT EL. 26.37

40 30 20 10 0

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00

-DR1-

BEGIN GRADE
-DR1- Sta.10+47.00 EL. 30.47' =
-L- Sta.164+09.00 (47' RT)

END GRADE
-DR1- POT Sta.12+75.49 EL. 28.90'

PI = 12+00.00
EL = 28.67'
VC = 150'
K = 102

(-)3.966% (+)0.3000% (-)1.1742%

PROPOSED GRADE

EXISTING GROUND

40 30 20 10 0

10+00 11+00 12+00 13+00 14+00

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PROJECT REFERENCE NO.	SHEET NO.
R-4463B	X-0
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

PERMIT PLAN SUBMITTAL

NC 43 CONNECTOR

CRAVEN COUNTY, NC

T.I.P. PROJECT R-4463B
CONTRACT # C201279
STATE PROJECT # 35601.3.2

SUMMARY OF CROSS SECTIONS

LINE	SHEET NO.
-L-	X-1 THRU X-52
-Y3-	X-53 THRU X-70
-RPA-	X-71 THRU X-75
-RPB-	X-76 THRU X-82
-RPC-	X-83 THRU X-87
-LPC-	X-88 THRU X-91
-Y8-	X-92 THRU X-96
-Y5-	X-97 THRU X-106
-Y6-	X-107 THRU X-108
-DR1-	X-109
-DR2-	X-110

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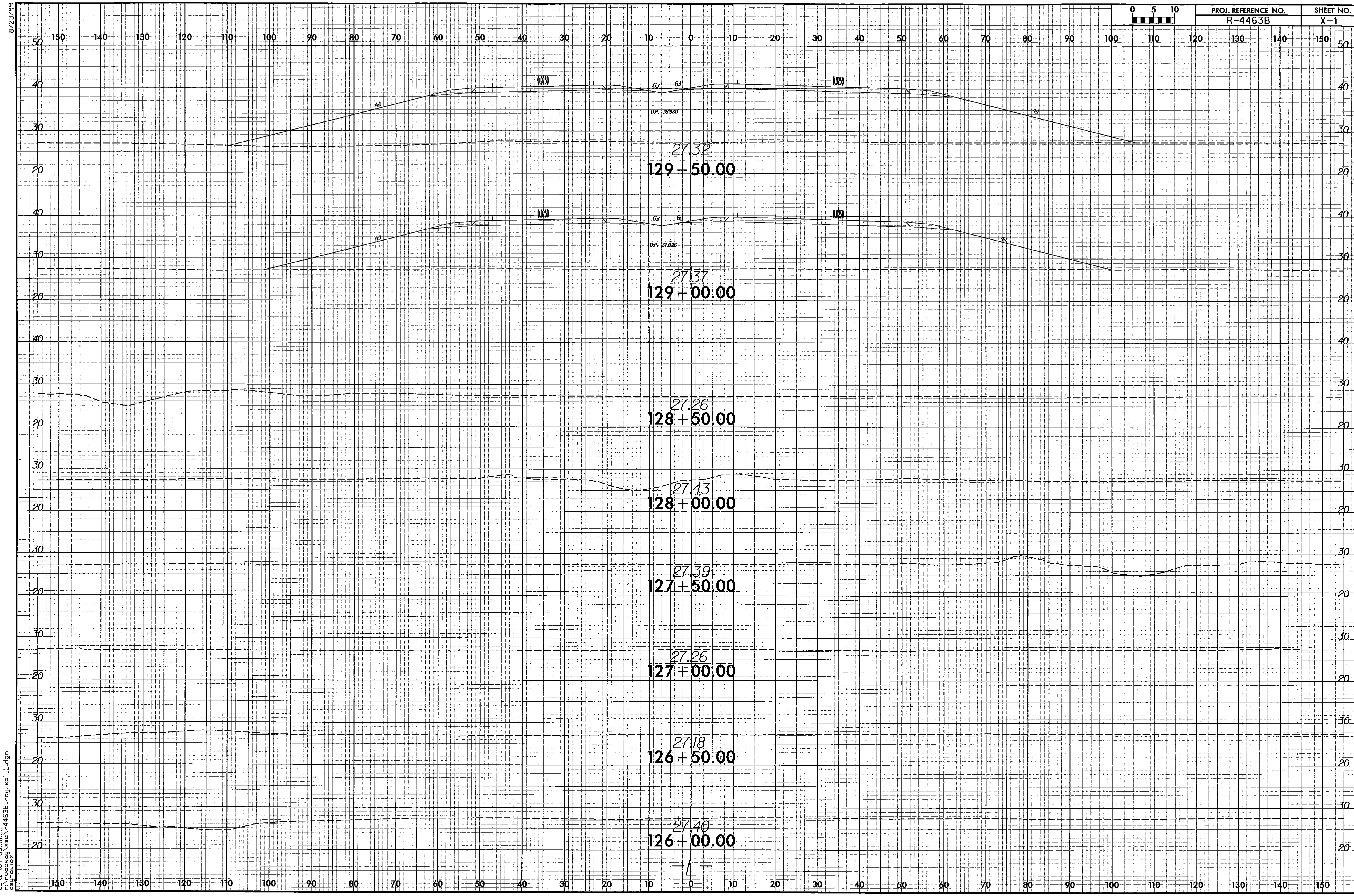

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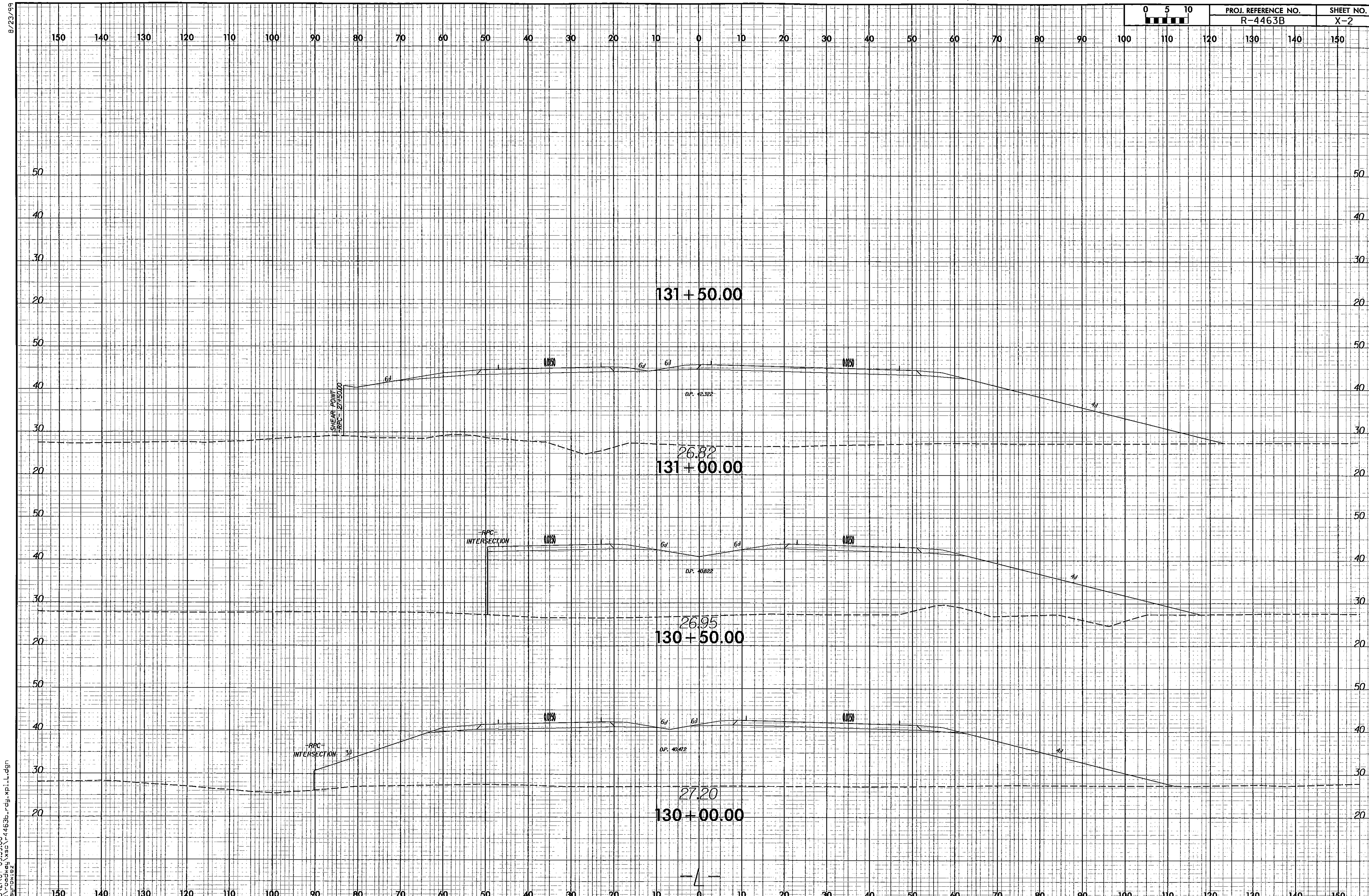
csynowiez



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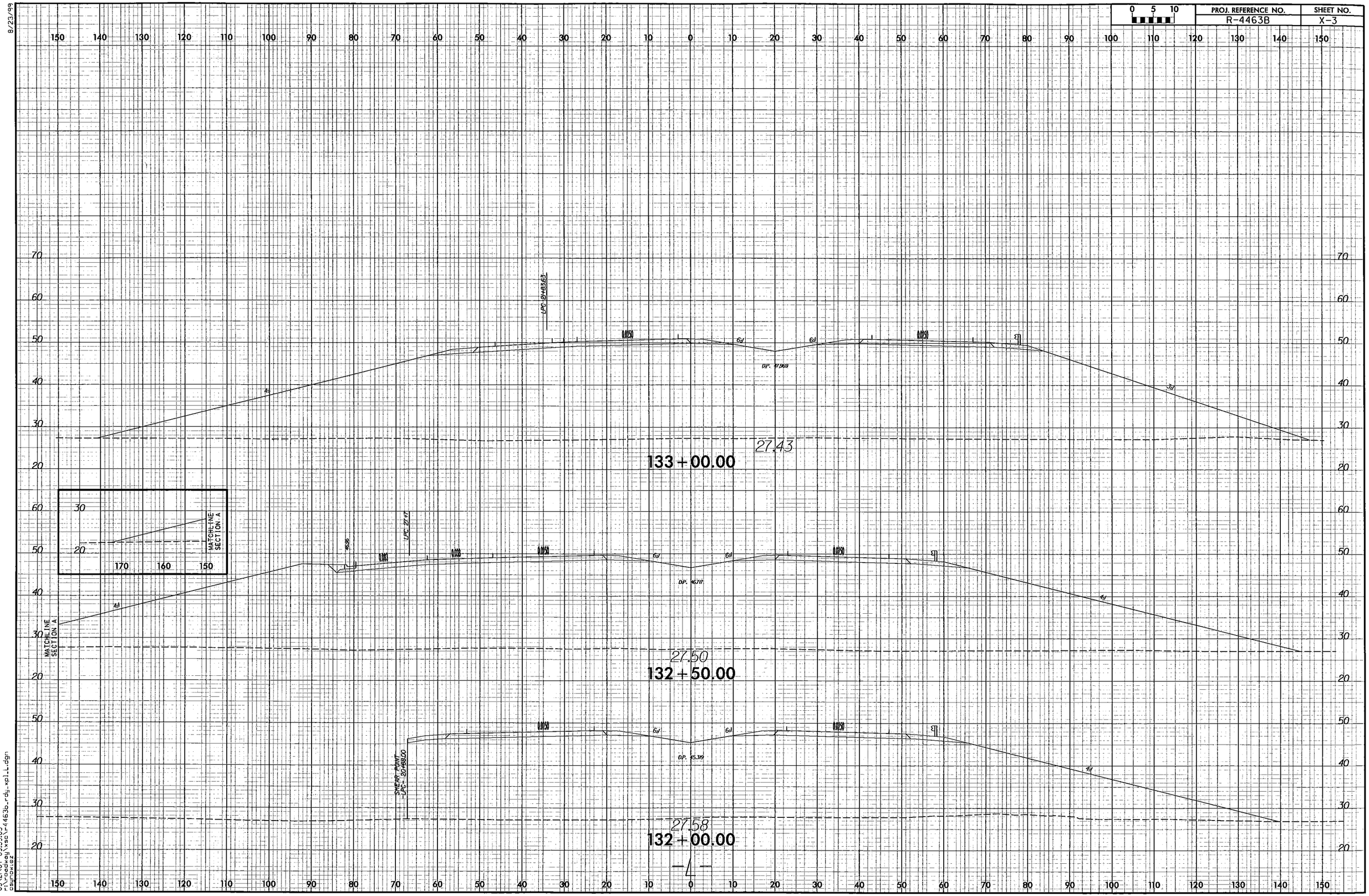
	R-4463B	X-3



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cgroves2

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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-4

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

60 50 40 30 20

0.0050 0.0050 4.334d 4.334d 0.0050

3:1 3:1

DP: 19763

26.99

134+50.00

60 50 40 30 20

0.0216 0.0050 5:1 5:1 0.0050

4:1 3:1

DP: 19349

27.11

134+00.00

70 60 50 40 30 20

DPC: 2243396

0.0179 0.0050 6:1 6:1 0.0050

4:1 3:1

DP: 19176

27.92

133+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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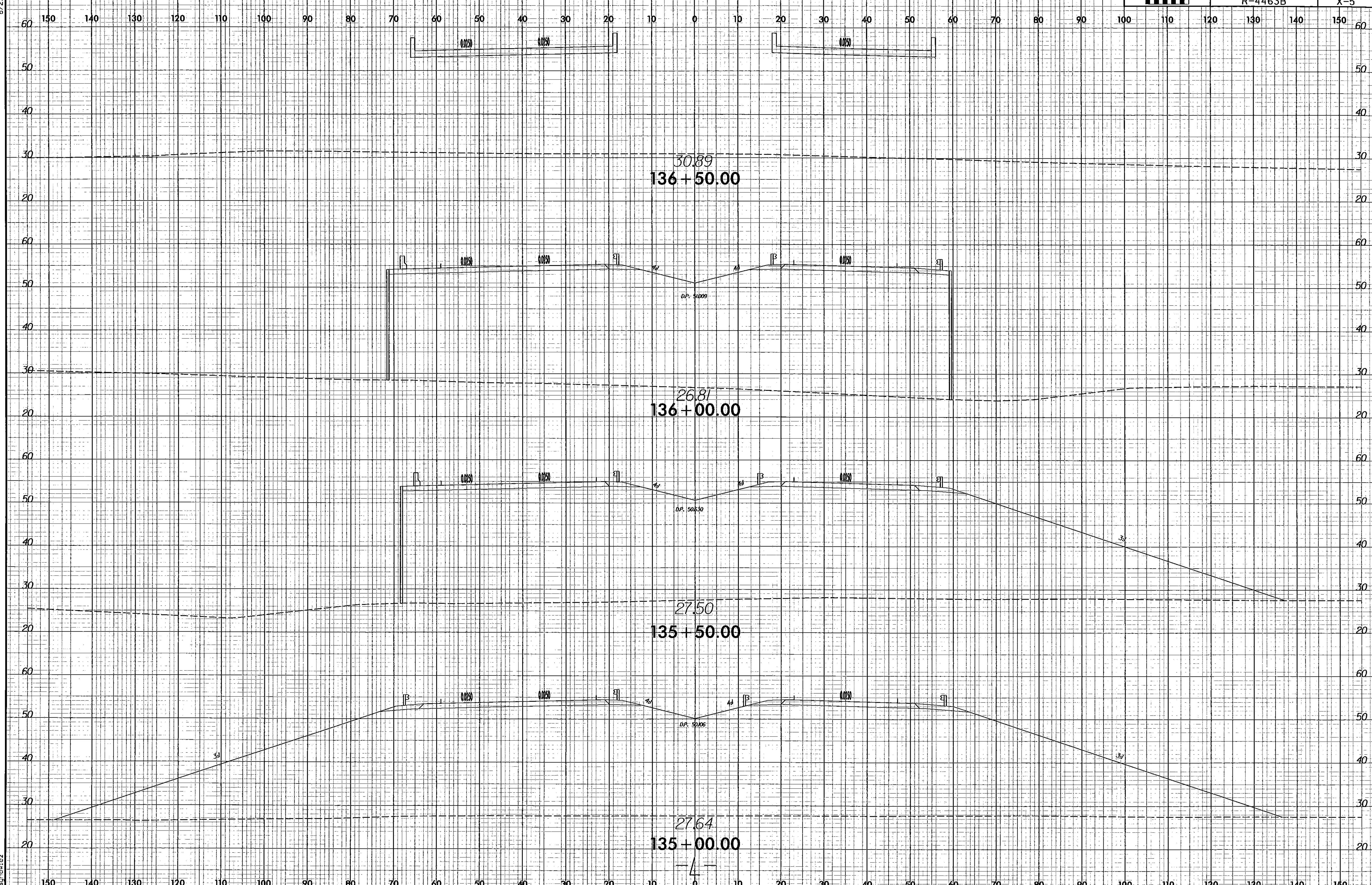
dsparrow2

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-5



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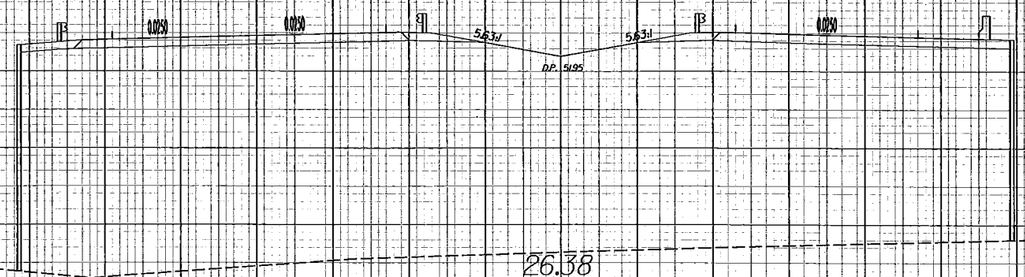
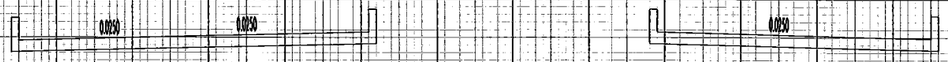
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-6

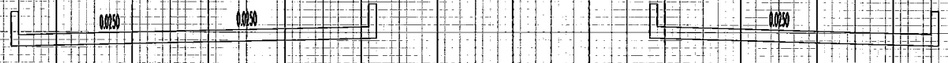


26.38
138+50.00

30.98
138+00.00



29.33
137+50.00



29.27
137+00.00

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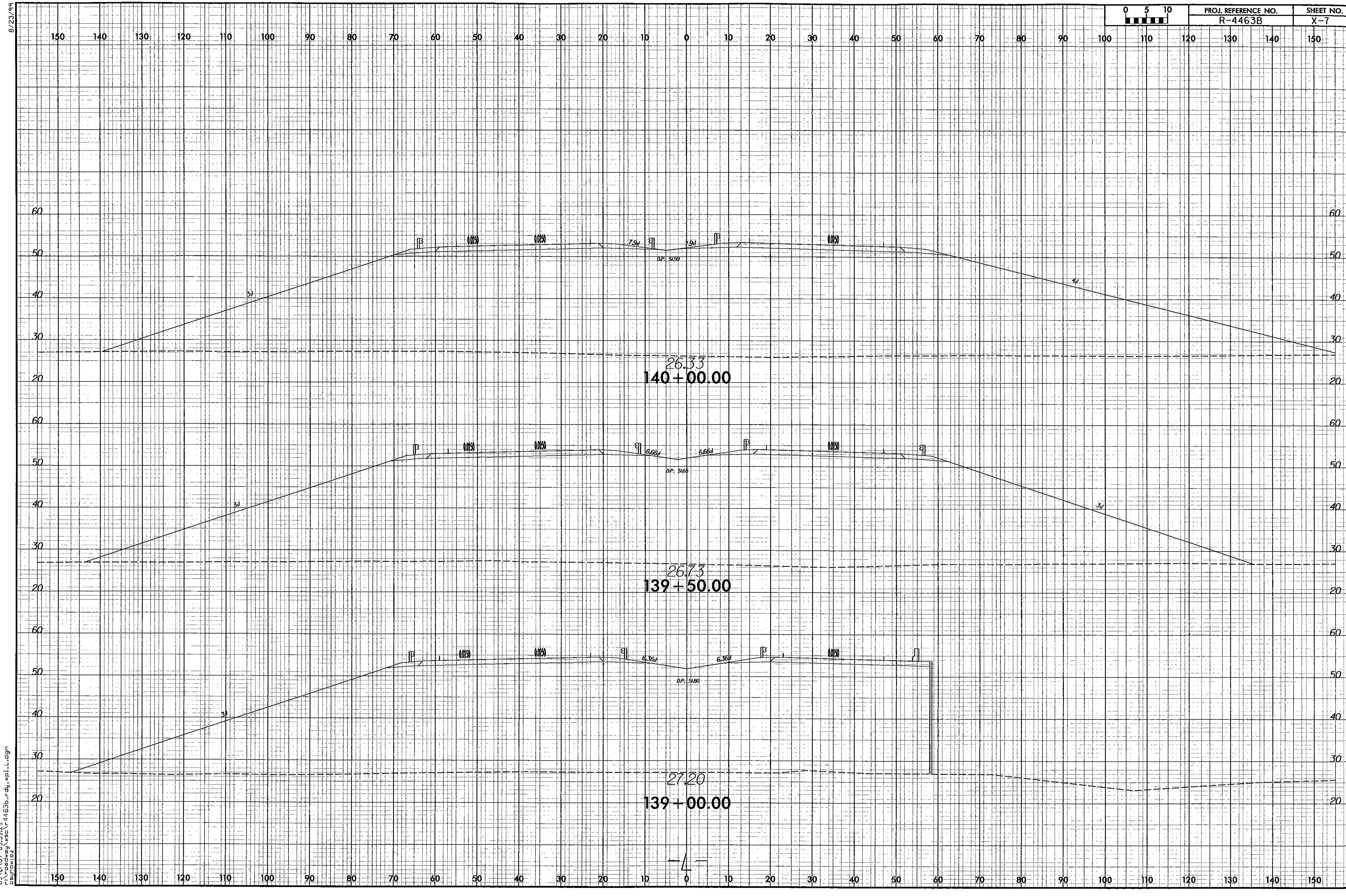
roadway

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-7



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esumowicz

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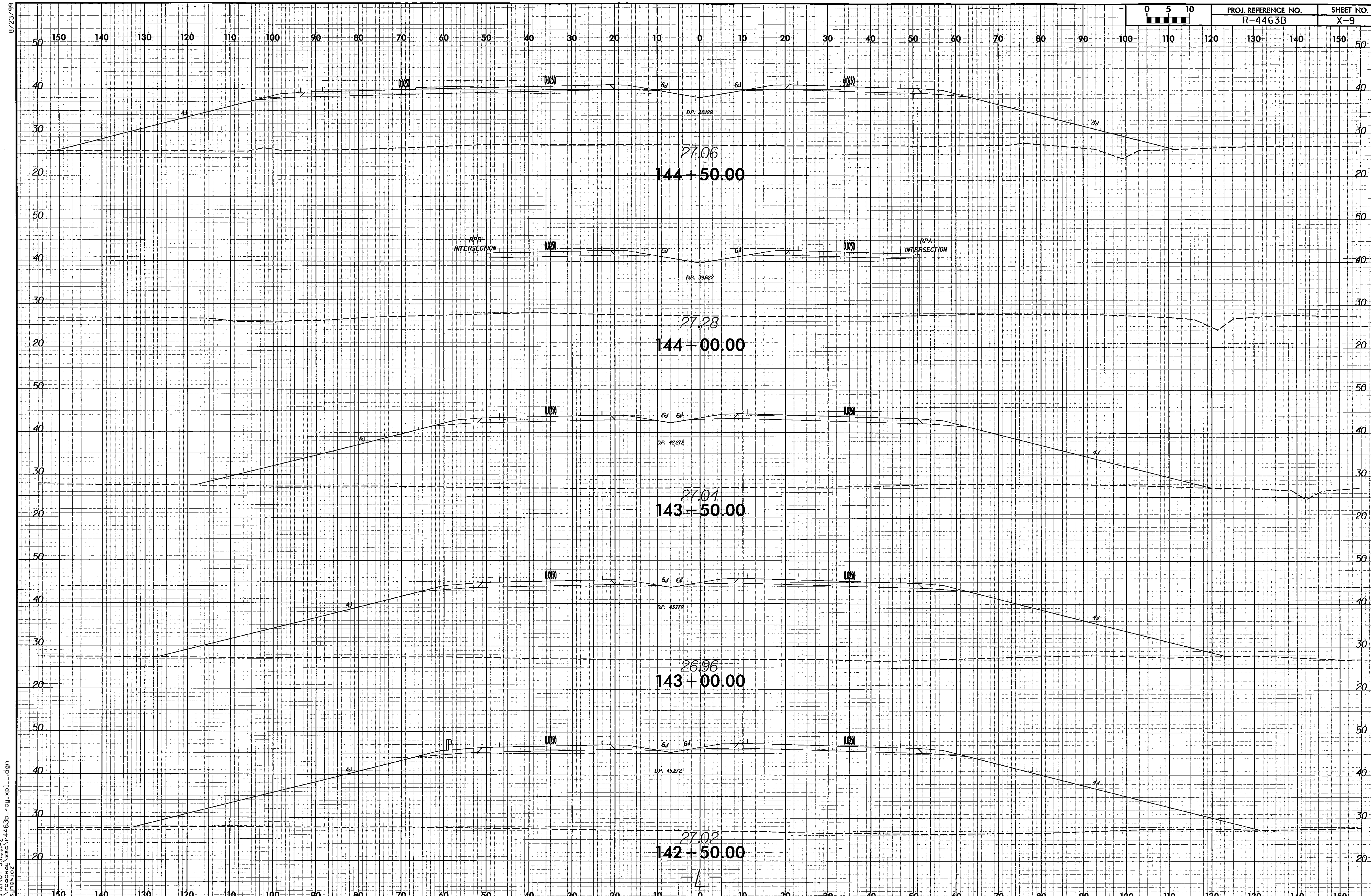
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-8

26.01
142+00.00

25.75
141+50.00

26.51
141+00.00

26.94
140+50.00



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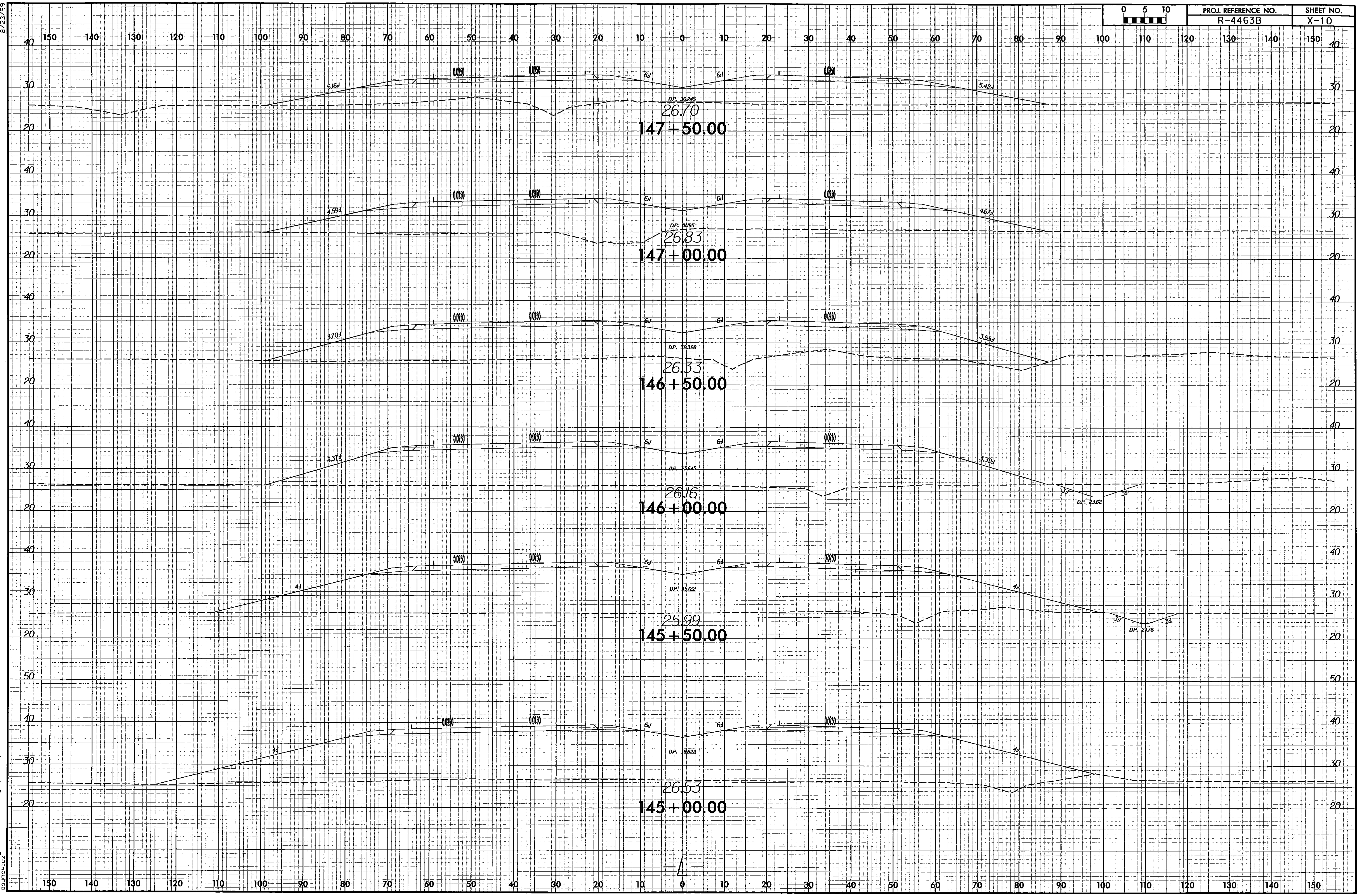
csuhnowiez

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-10



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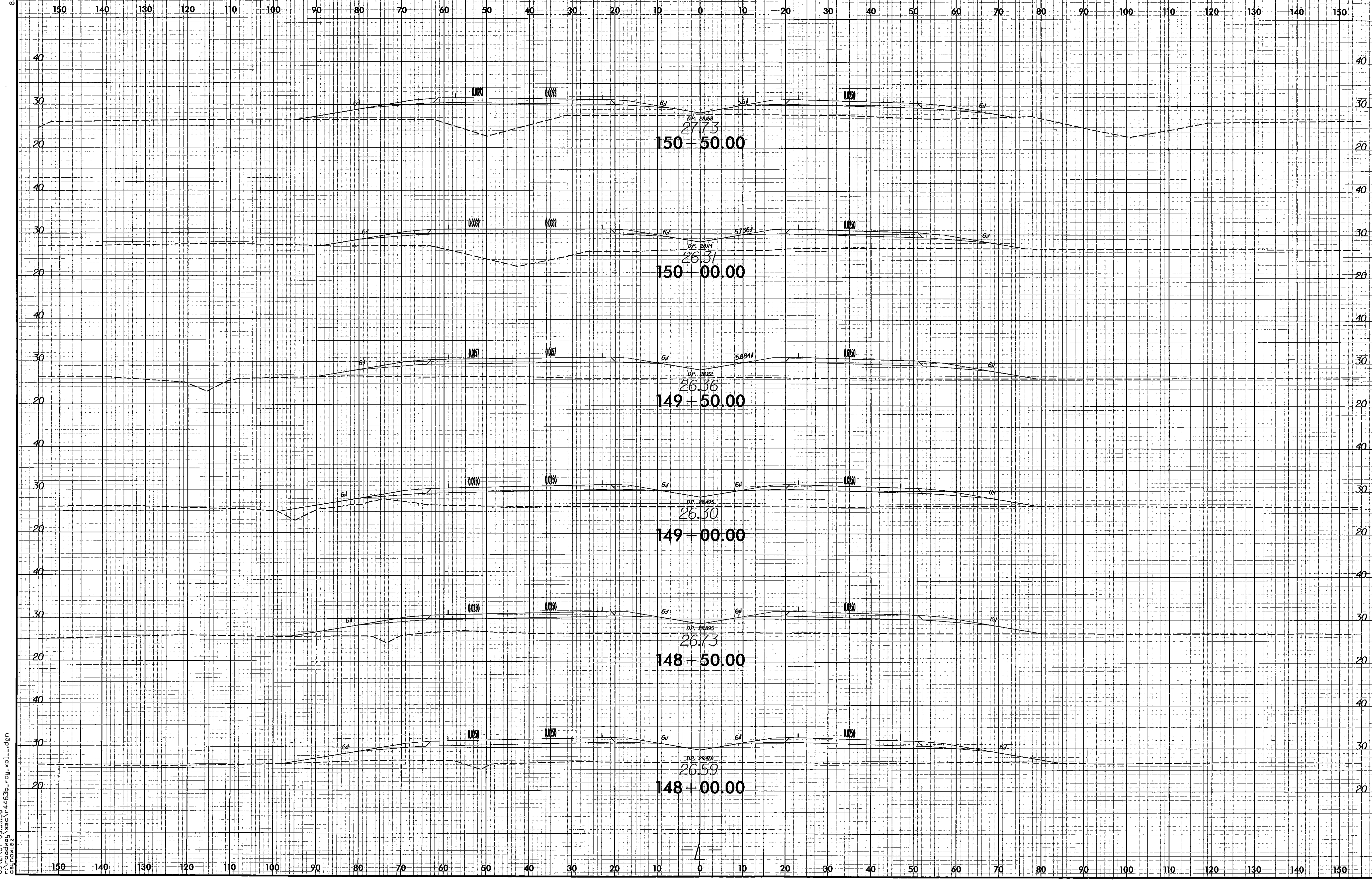
R-4463B	X-11



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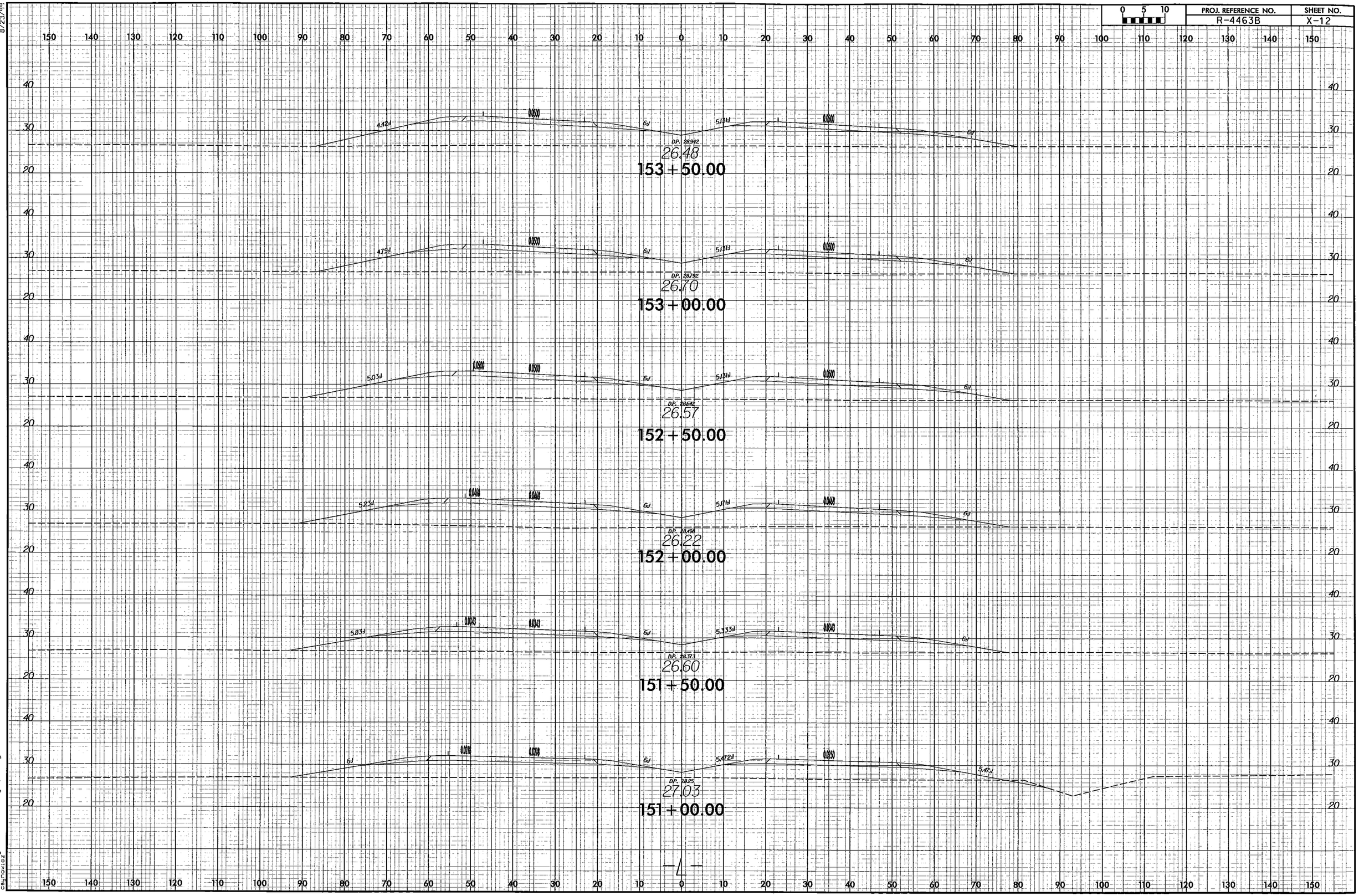
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-12



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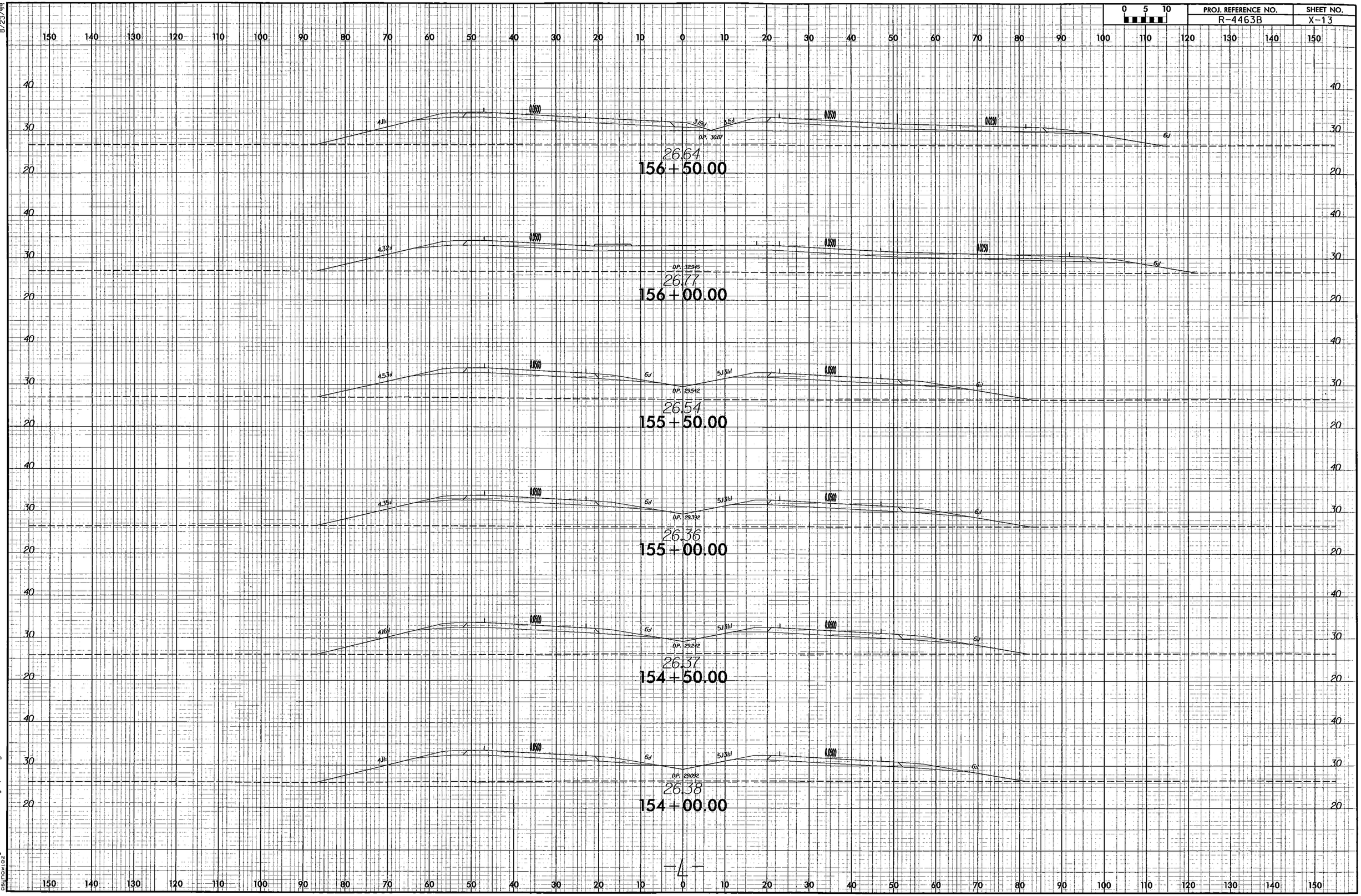
cadwood

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-13



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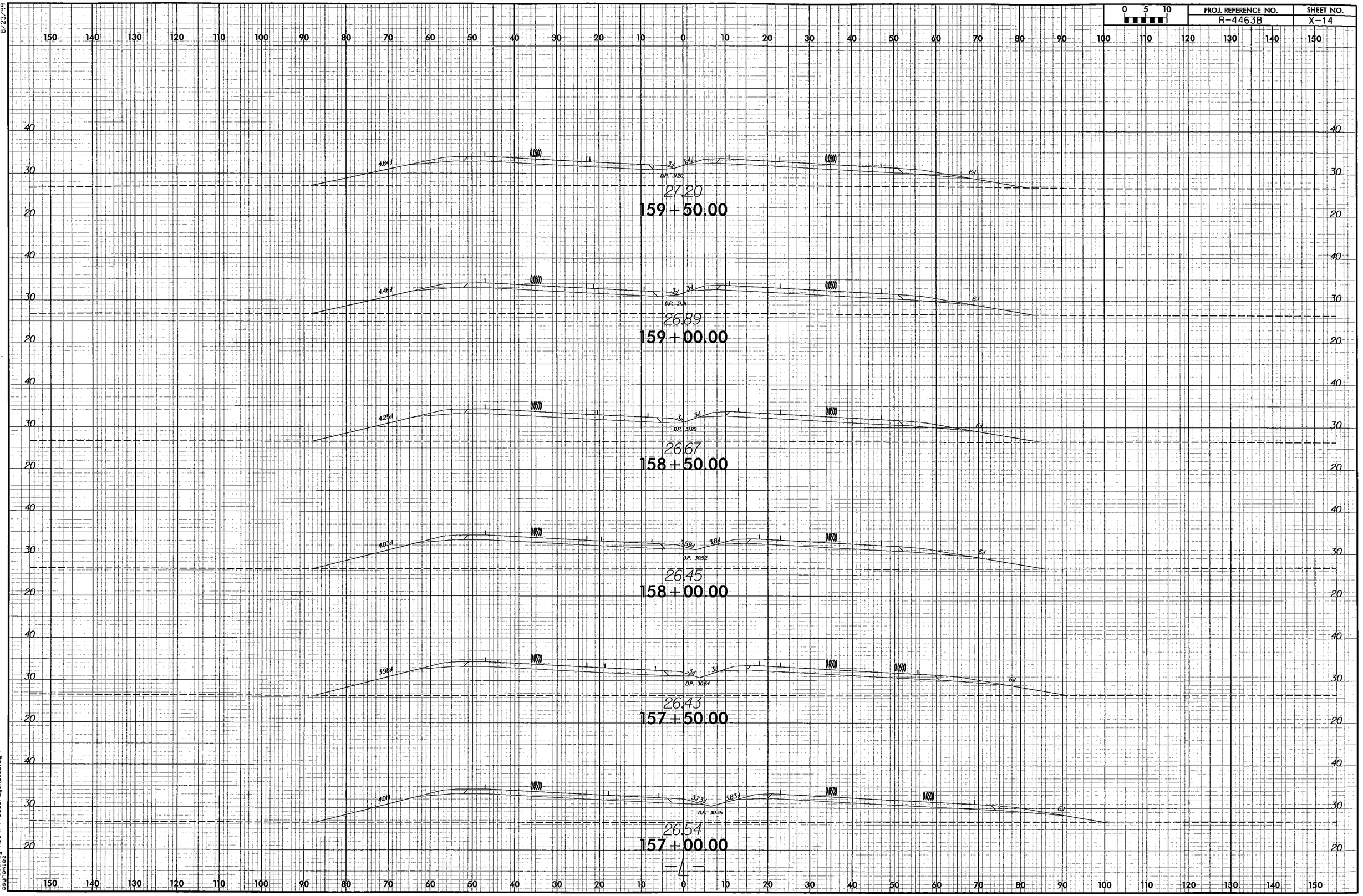
r:\roadway\xsc\r4463b_rdy_xpll.dgn
sshowtez

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-14



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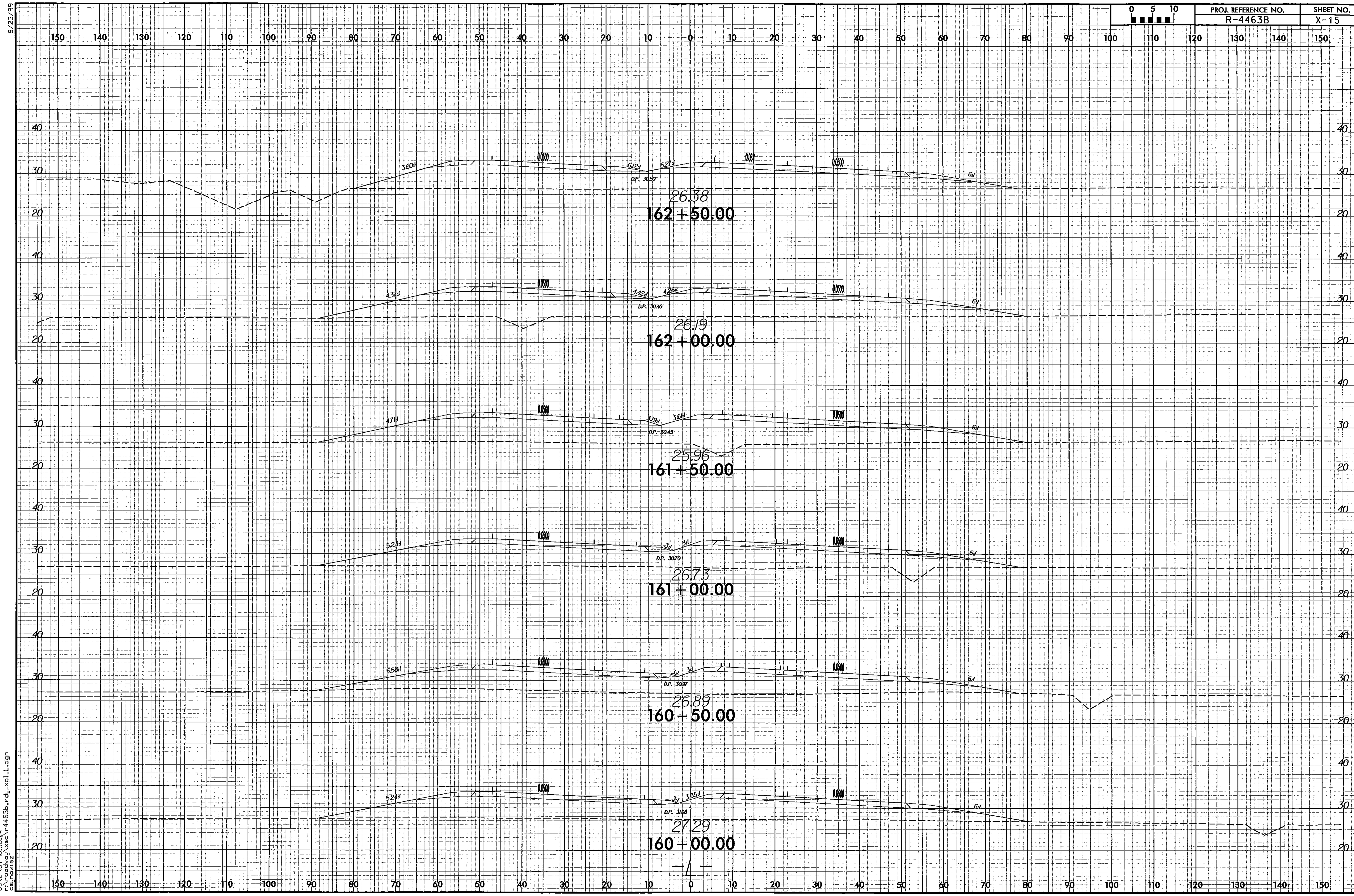
dsharp02



PROJ. REFERENCE NO.
R-4463B
SHEET NO.
X-15
0 5 10
8/23/99
26.38
162+50.00
26.19
162+00.00
25.96
161+50.00
26.73
161+00.00
26.89
160+50.00
27.29
160+00.00
-4-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-16

26.34
165+50.00

26.55
165+00.00

26.66
164+50.00

29.53
164+00.00

25.50
163+50.00

26.56
163+00.00

05\2\07 10:00:30
c:\projects\r4463b\r4463b_rdy_xpl1.dgn
csumonda

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-17

26.77
168+50.00

26.82
168+00.00

26.57
167+50.00

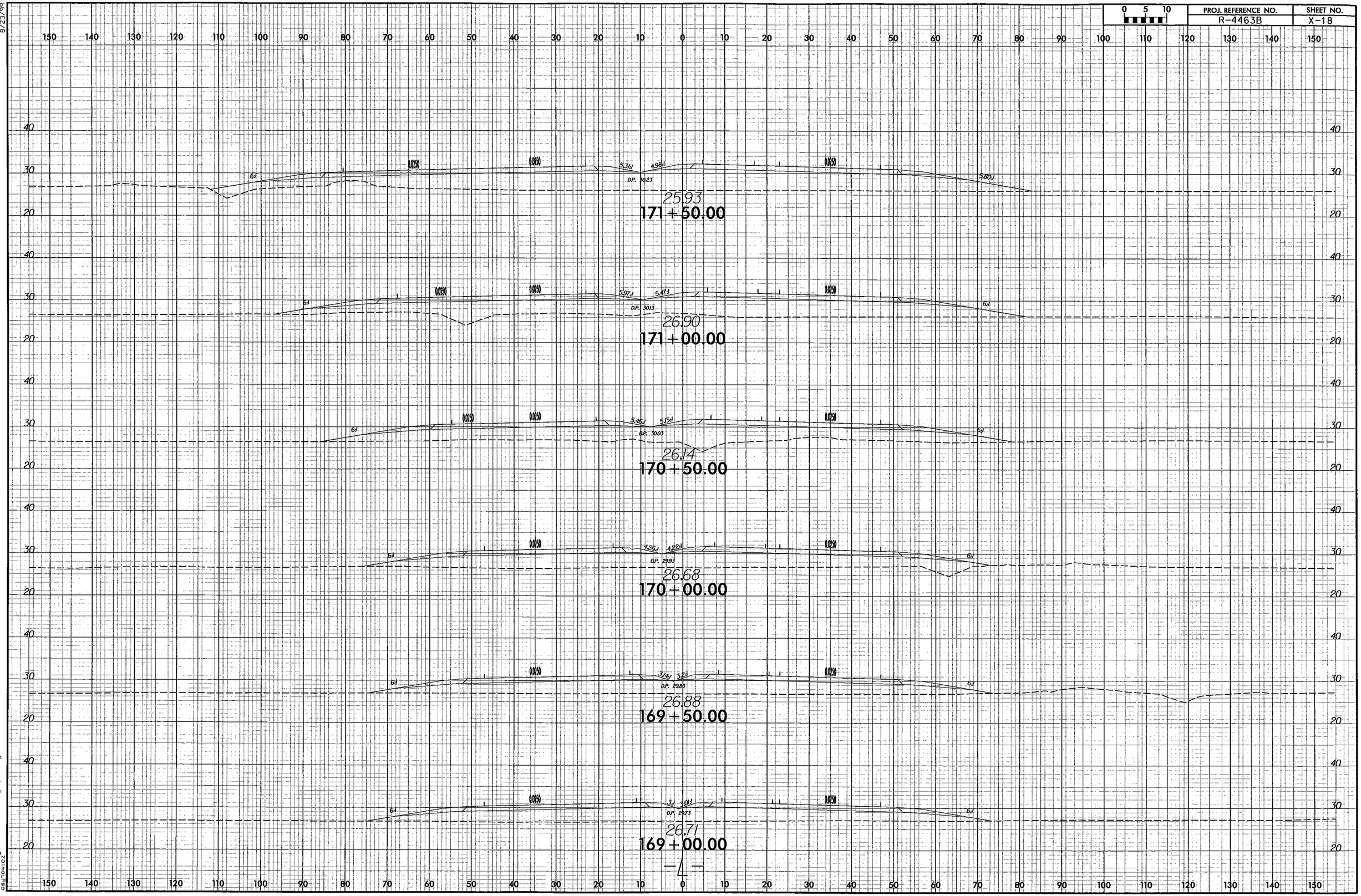
26.03
167+00.00

26.28
166+50.00

27.00
166+00.00

8/23/99

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



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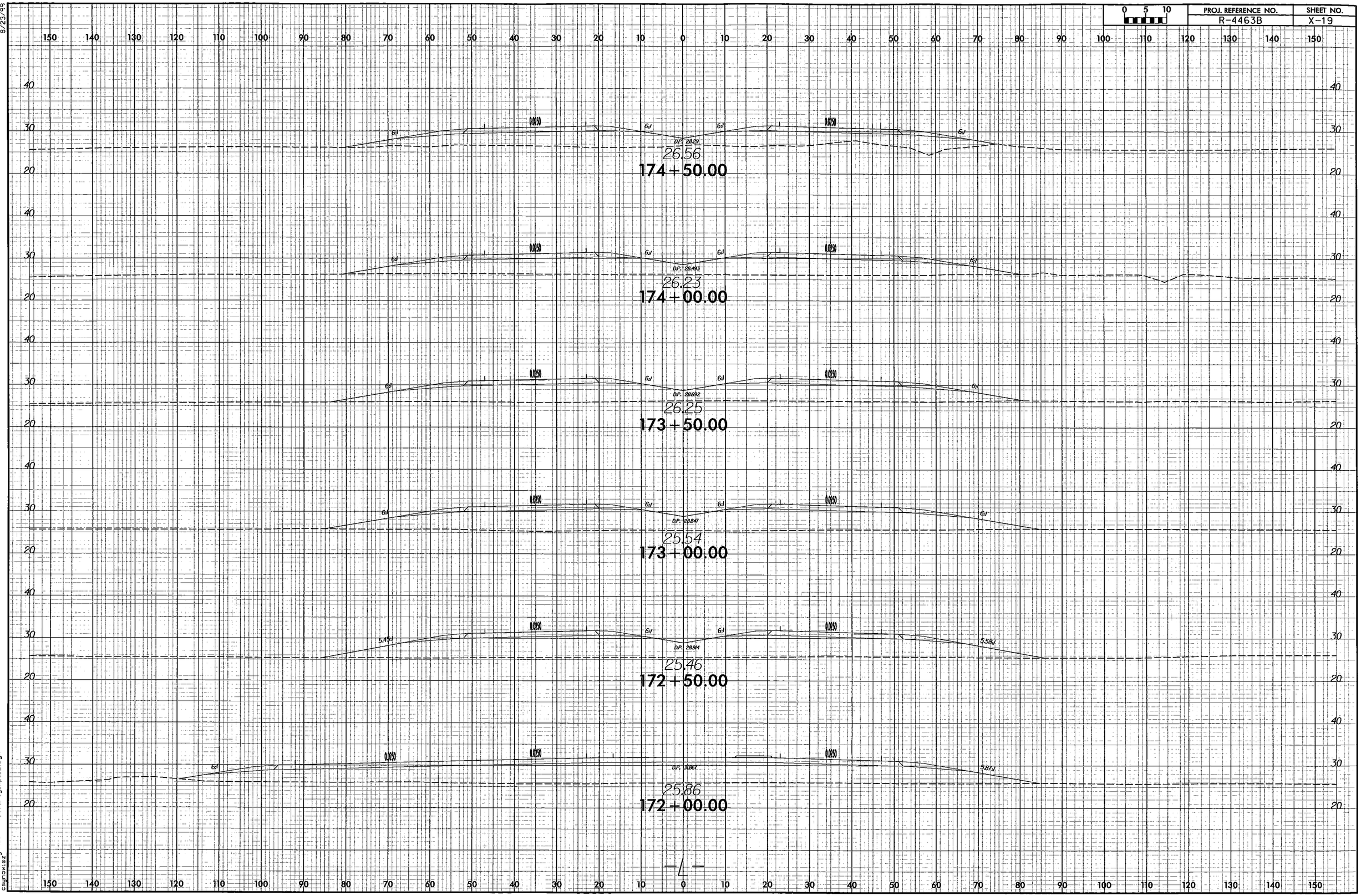
dgnuser2

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-19



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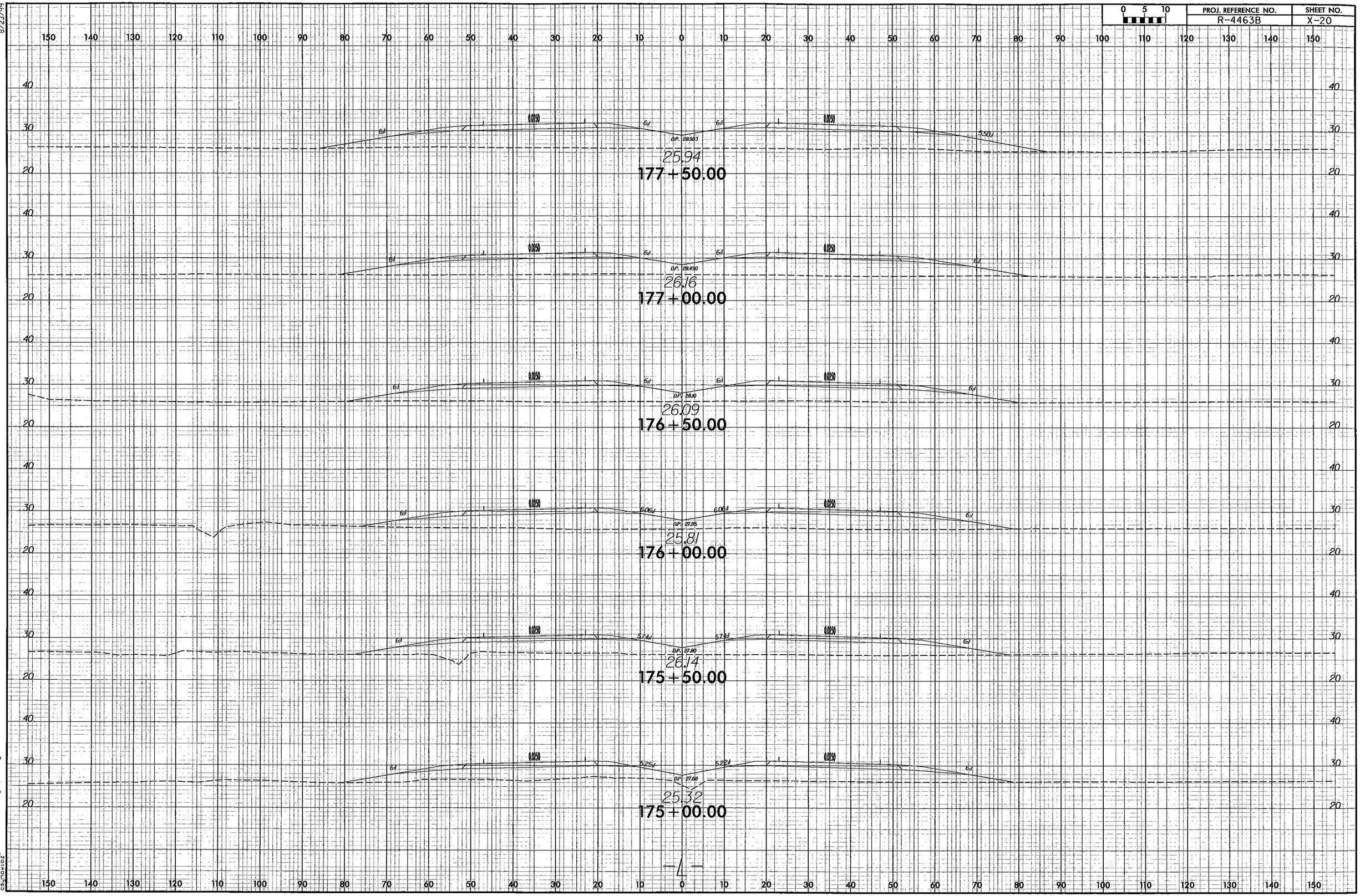
dsymonez

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-20



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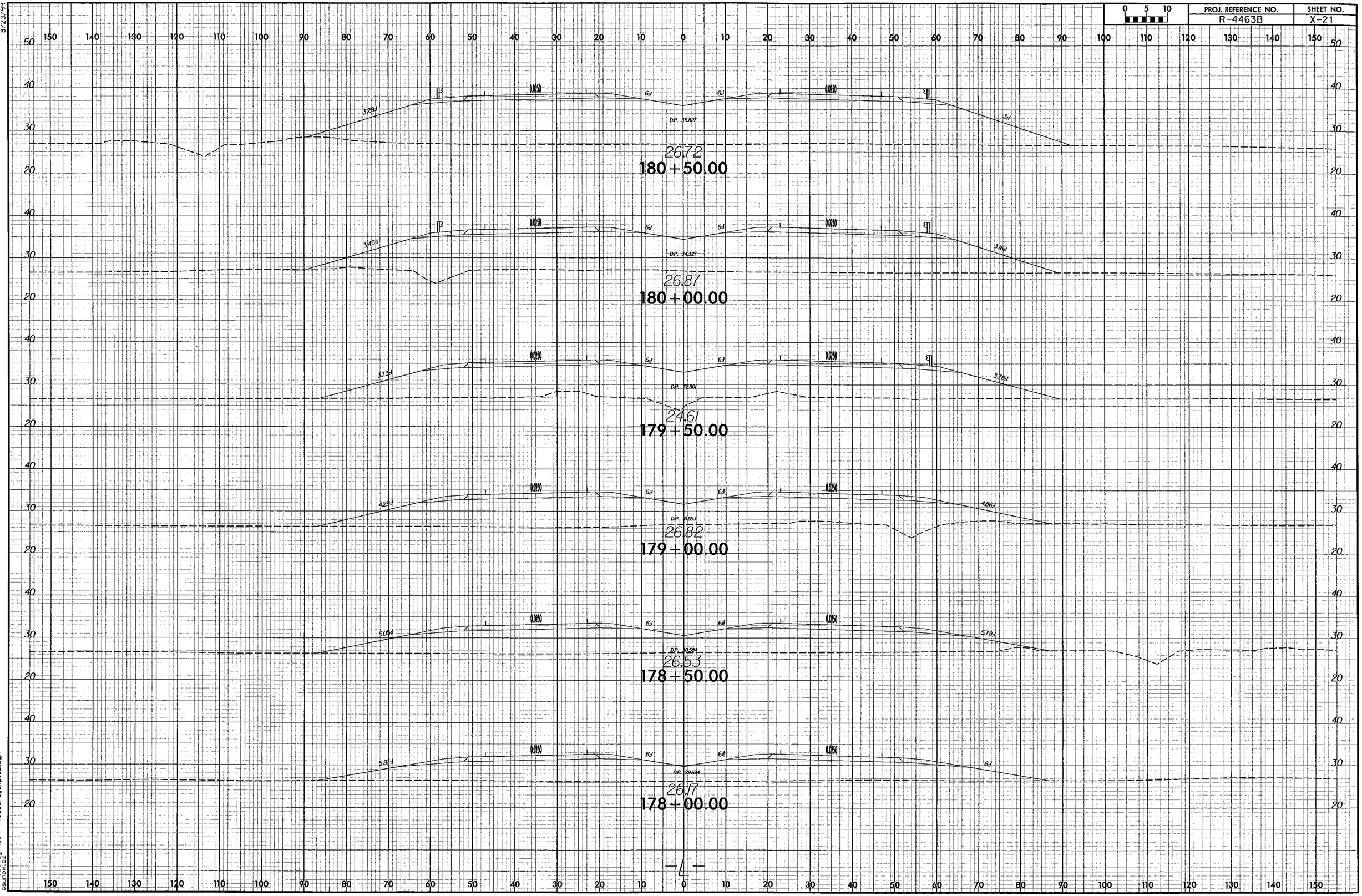
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-21



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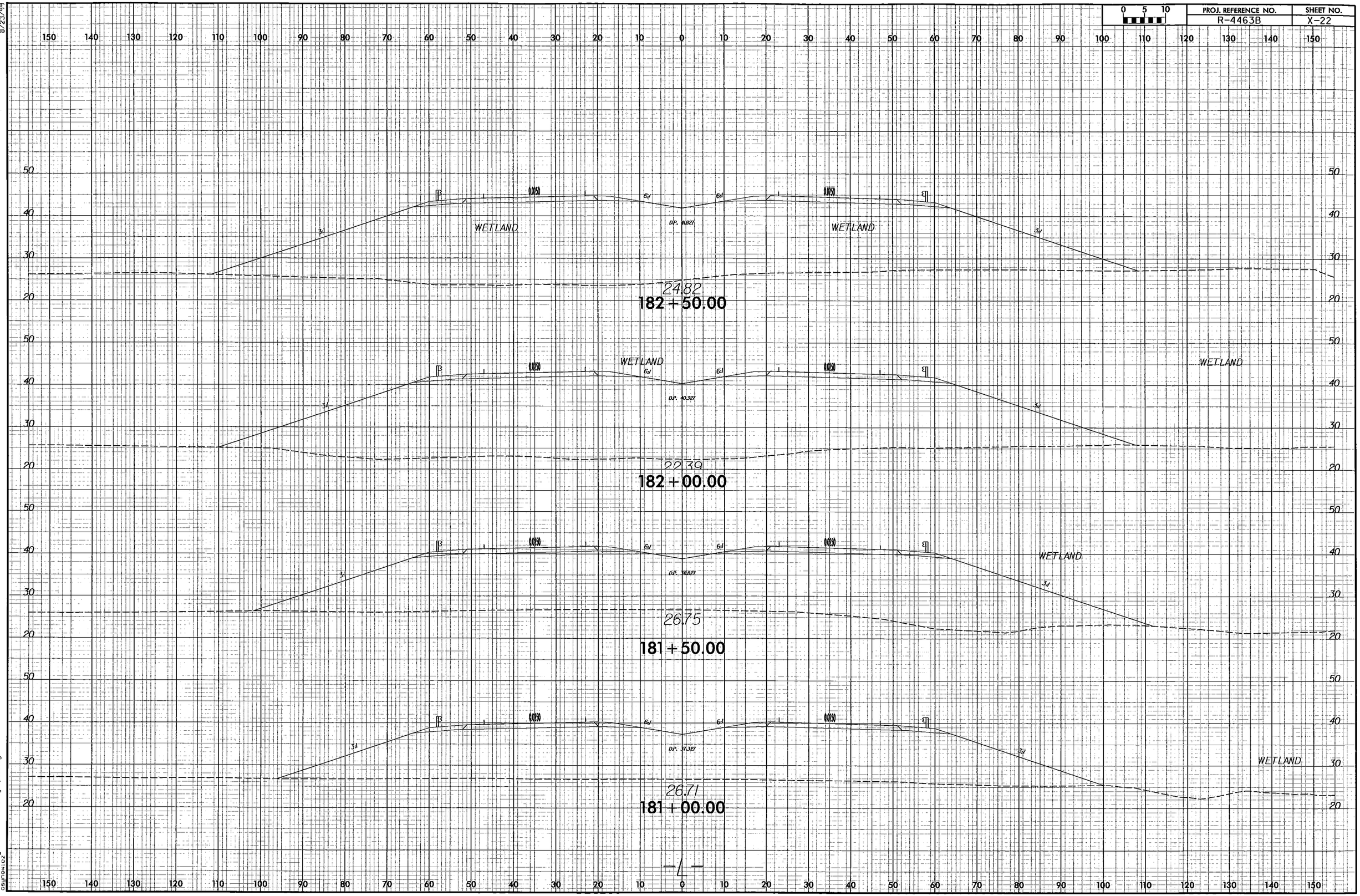
C:\projects\r4463b-rdy-pl1.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-22



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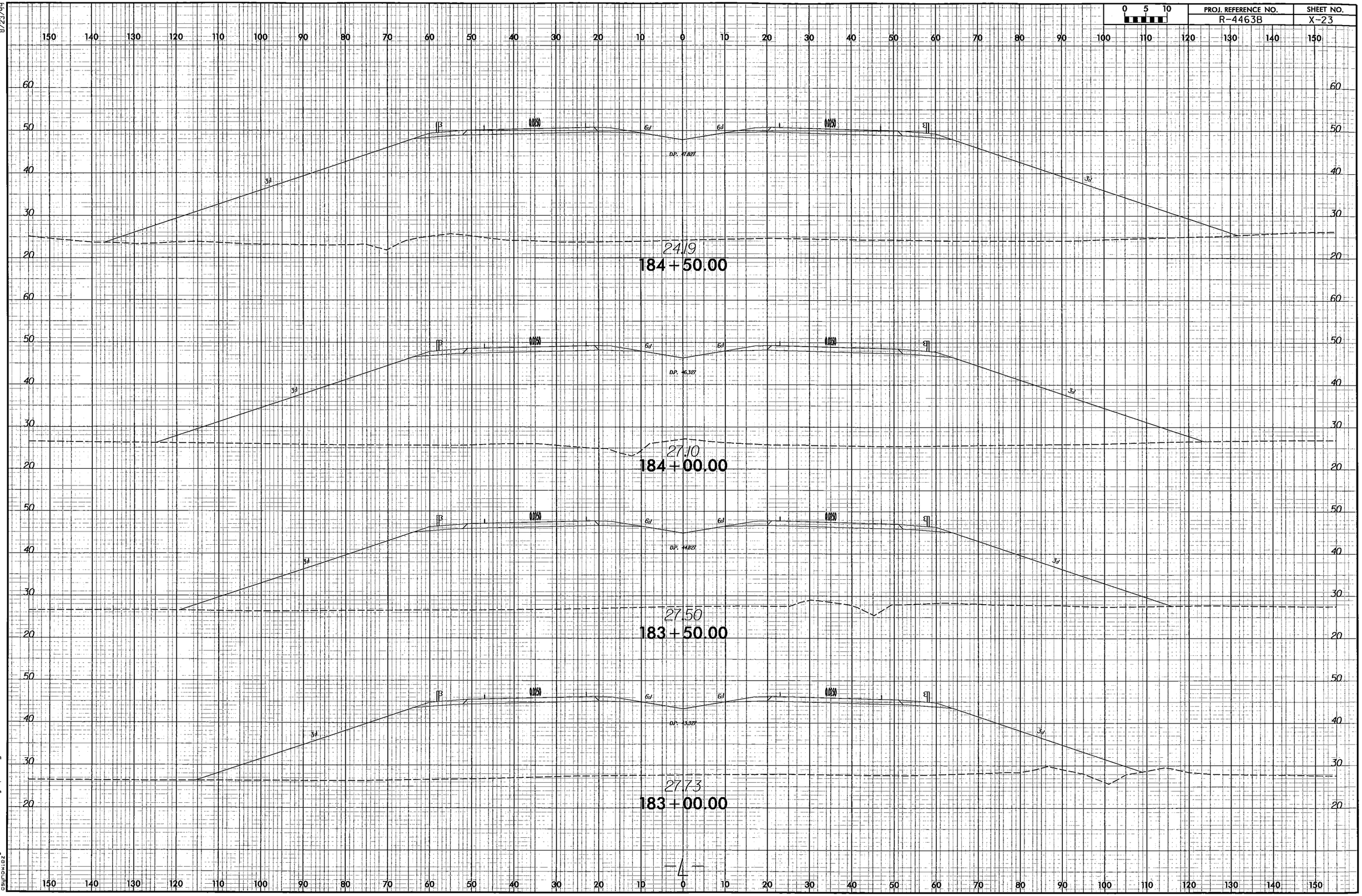
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-23



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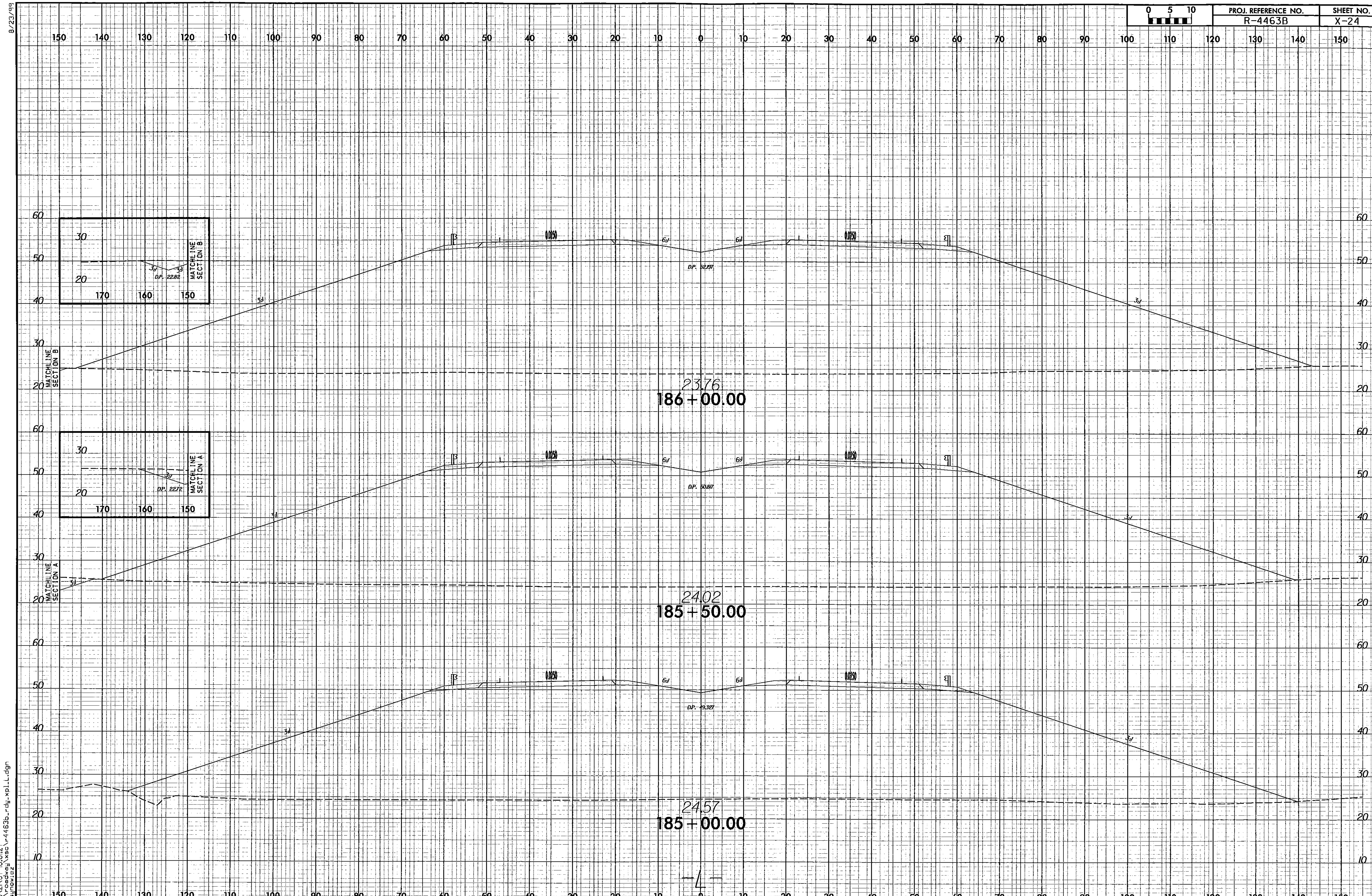
n:\roadway\xsc\r-4463b_rdy_xpl_l.dgn
cgoodroe

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-24

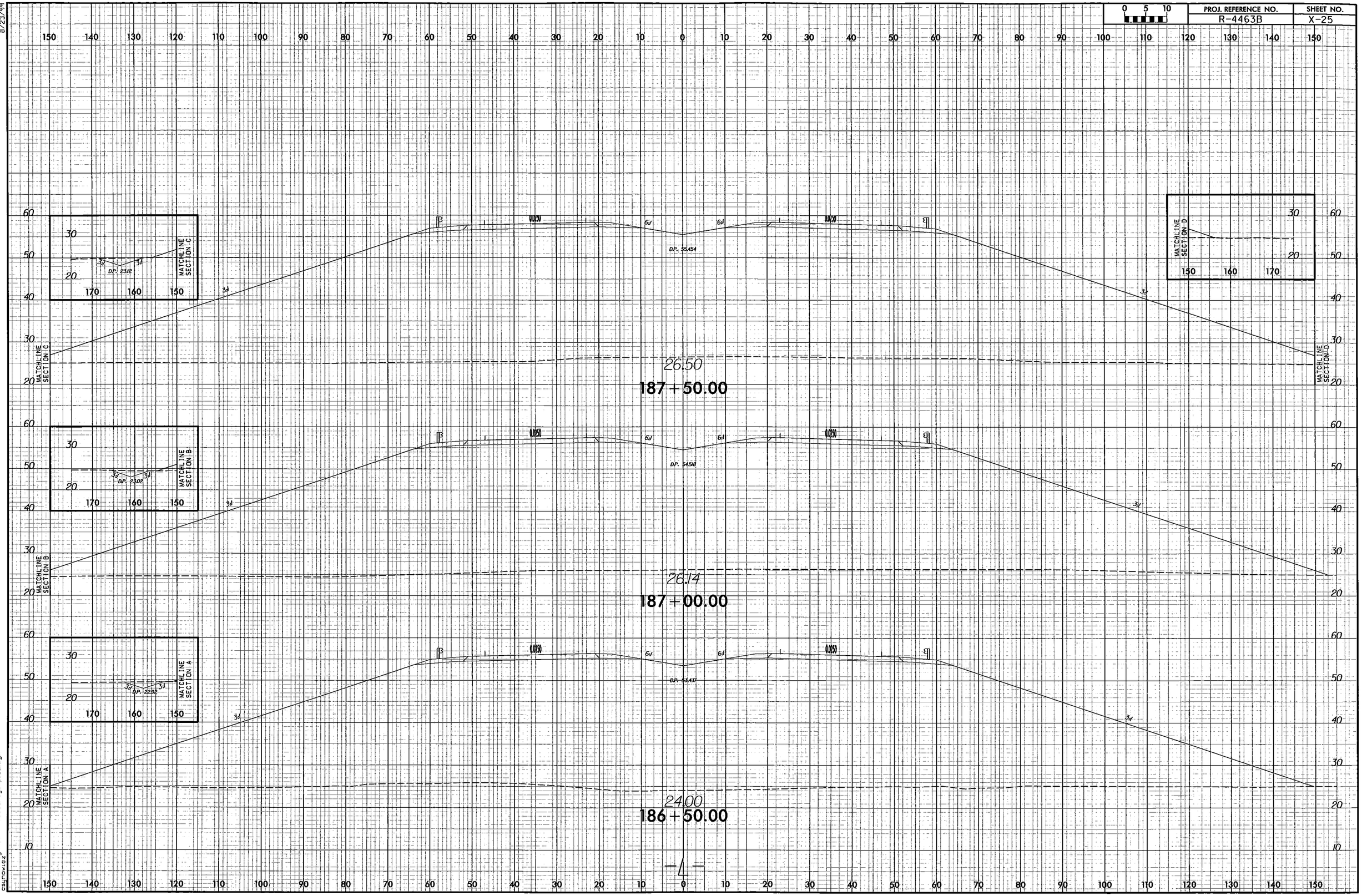


8/23/99

05\21\07 10:01:27
r:\roadway\xsc\r4463b_rdy_xpl_L.dgn
dsynowiec

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-25



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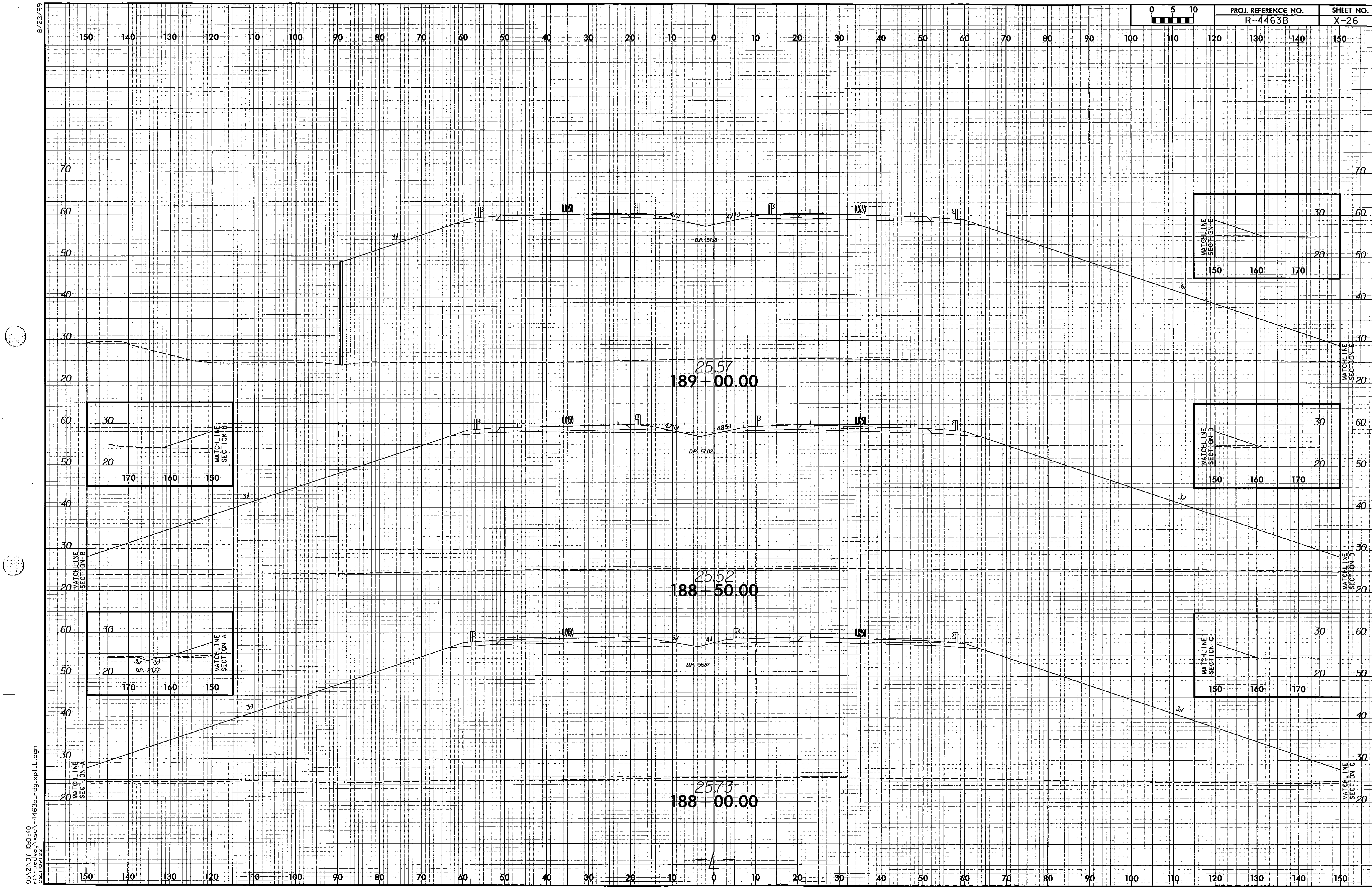
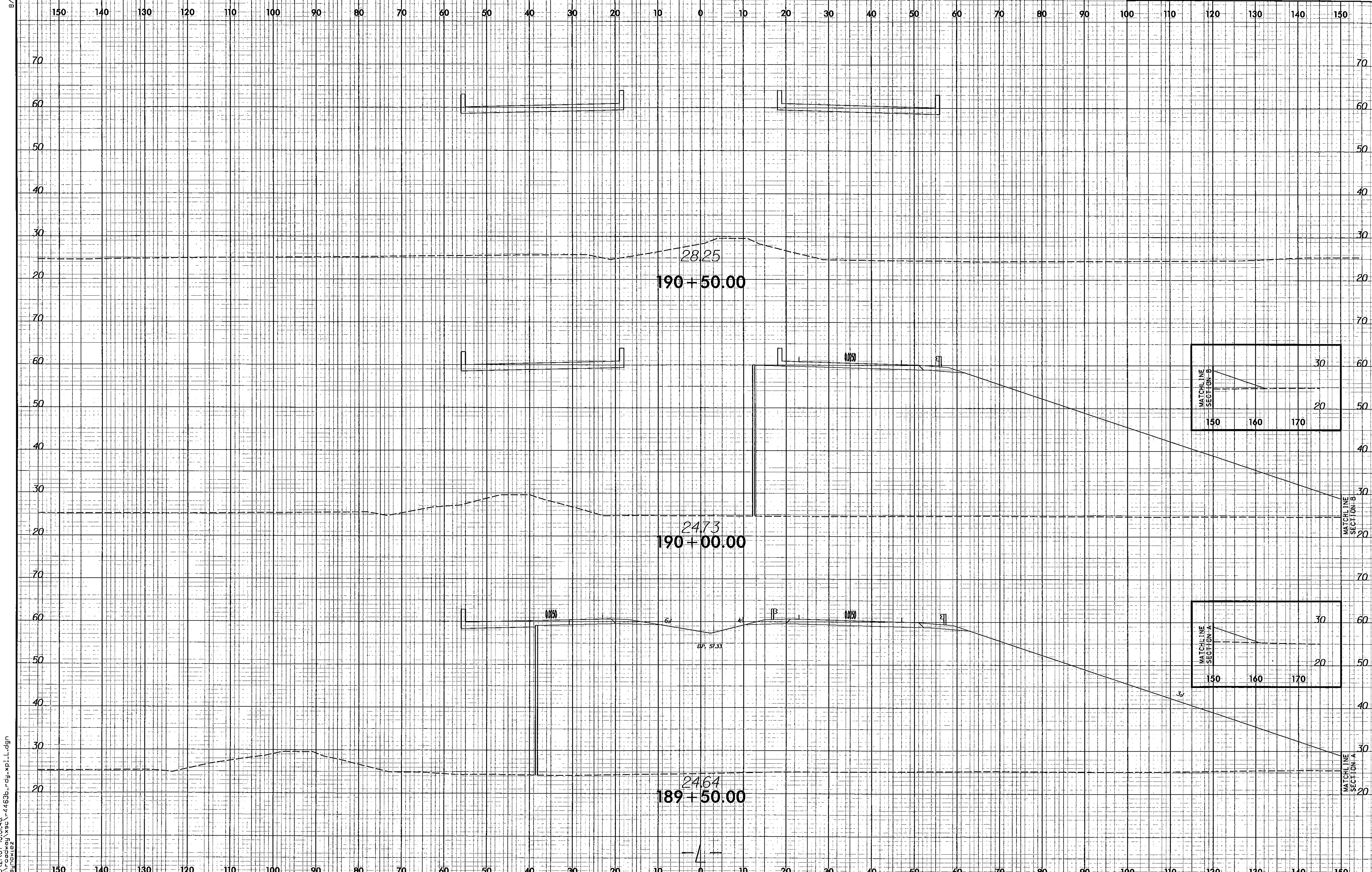
c:\roadeng\sdc\r-4463b_rdy_xpll.dgn
cjhowell



PROJ. REFERENCE NO.
R-4463B
SHEET NO.
X-26
0 5 10
25.57
189+00.00
D.P. 57.8
25.52
188+50.00
D.P. 57.02
25.73
188+00.00
MATCHLINE SECTION A
MATCHLINE SECTION B
MATCHLINE SECTION C
MATCHLINE SECTION D
MATCHLINE SECTION E
D.P. 23.22
8/23/99
-L-

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-27



8/23/99

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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-28

MATCHLINE SECTION C

MATCHLINE SECTION B

MATCHLINE SECTION A

3:1

0.05%

4.25%

4.23%

D.P. 5676

25.20

192+00.00

4.35%

4.34%

D.P. 5691

24.95

191+50.00

25.30

191+00.00

05\21\07 10:01:52
c:\roadeng\xsc\r4463b_rdy_xpi_L.dgn
eagleowl2

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-29

26.13
193+50.00

27.02
193+00.00

22.74
192+50.00

D.P. 55.10
D.P. 56.46
D.P. 56.61
D.P. 21.93
D.P. 23.33

MATCH LINE SECTION A
MATCH LINE SECTION B
MATCH LINE SECTION C
MATCH LINE SECTION D
MATCH LINE SECTION E
MATCH LINE SECTION F

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-30

WETLAND

3:1

6:1

0.05

DP. 51666

24.30

195+00.00

DP. 52959

24.05

194+50.00

DP. 54102

24.69

194+00.00

MATCH LINE SECTION A

3:1

6:1

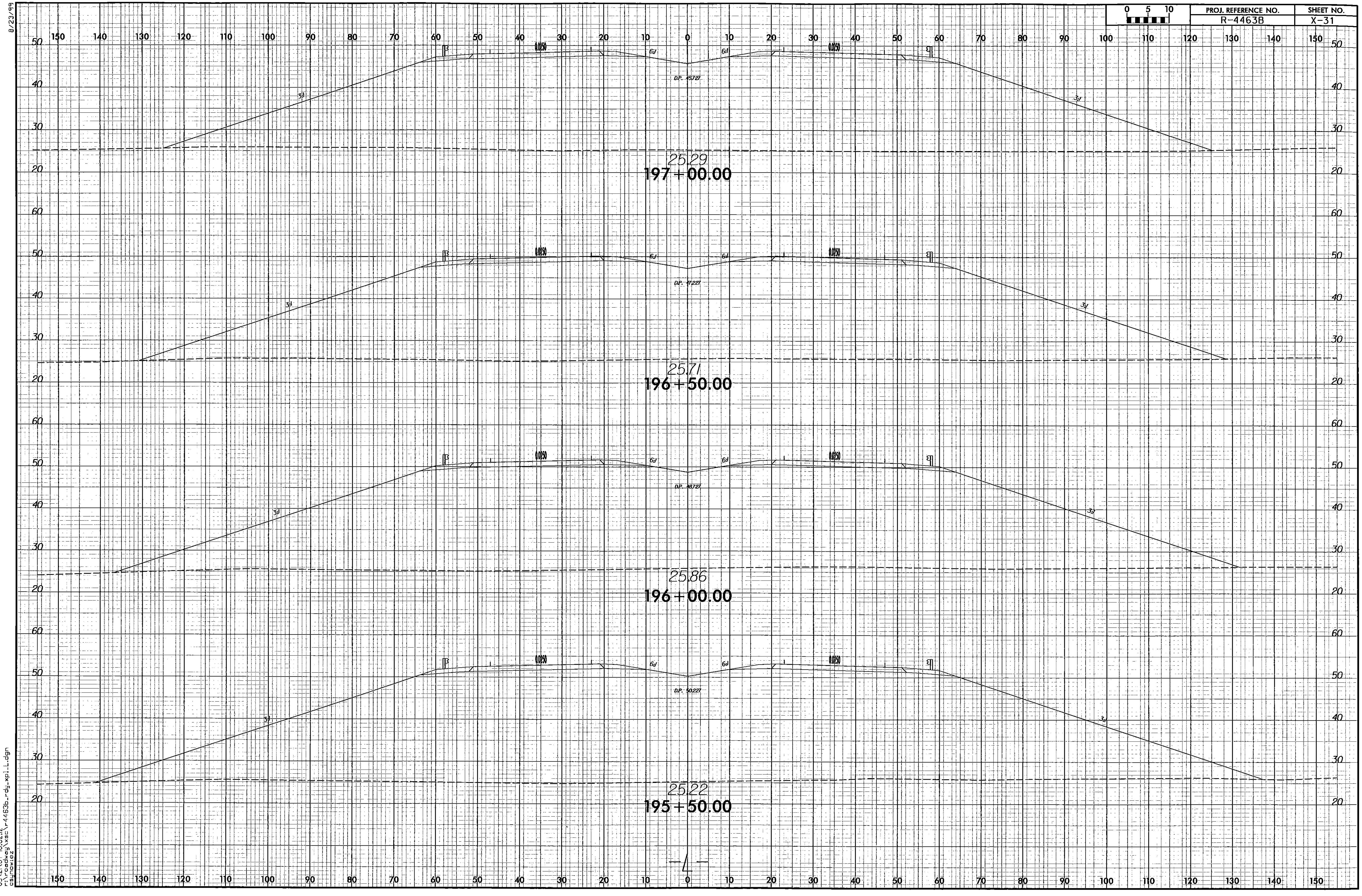
DP. 20254

MATCH LINE SECTION A

-4-

05:21\07 10:02:06
c:\projects\xsc\r-4463b_rdy_xpll.dgn
csurocak

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-31

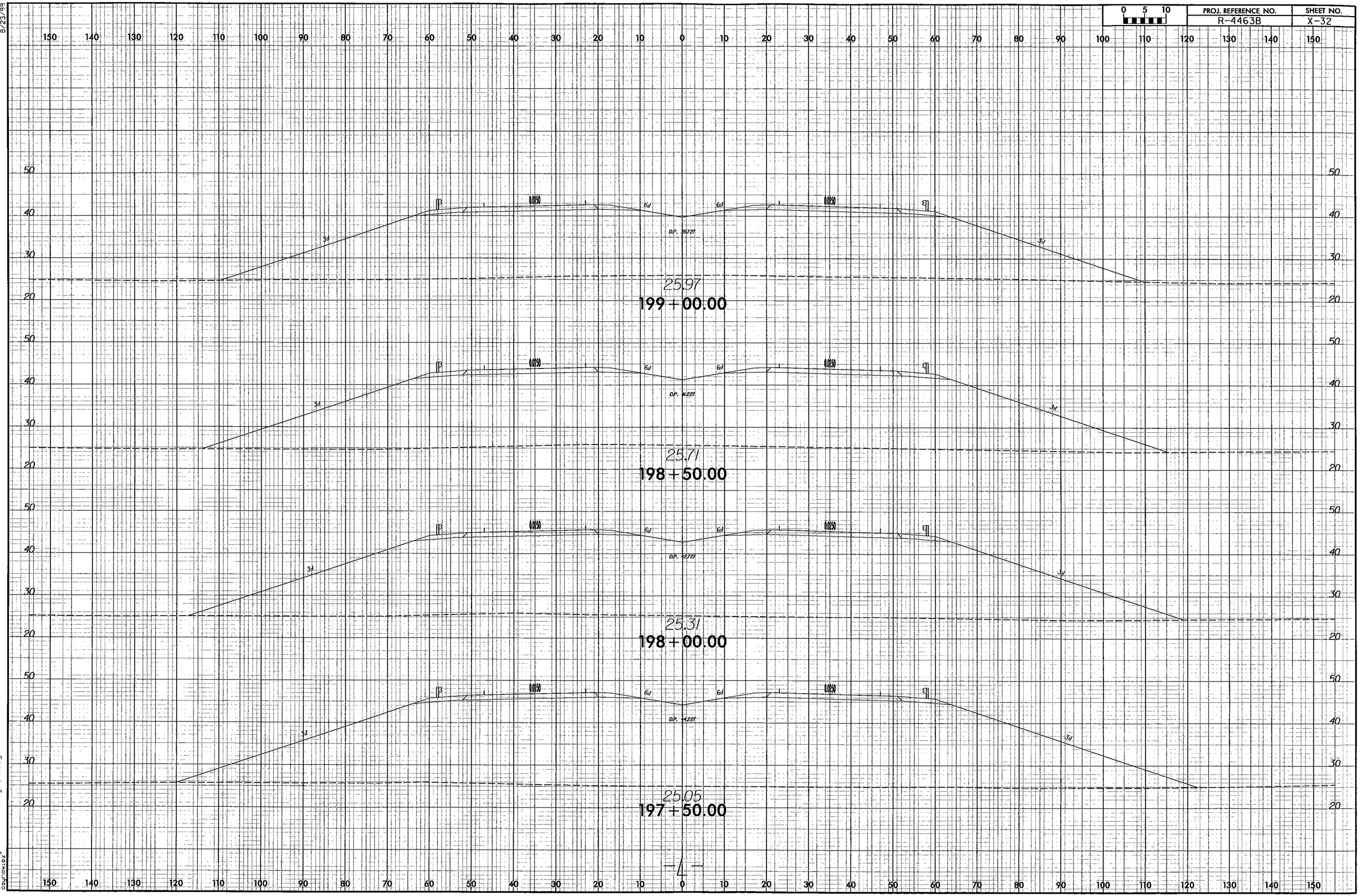


8/23/99

05\21\07 10:02:12
r:\roadway\xsc\r4463b_rdy_xpl_L.dgn
csynowiez

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-32



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c:\projects\r4463b_rdy.xpl1_dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-33

DP. 32668

21.86

201+50.00

DP. 33858

23.94

201+00.00

DP. 35230

24.30

200+50.00

DP. 36727

25.05

200+00.00

DP. 38227

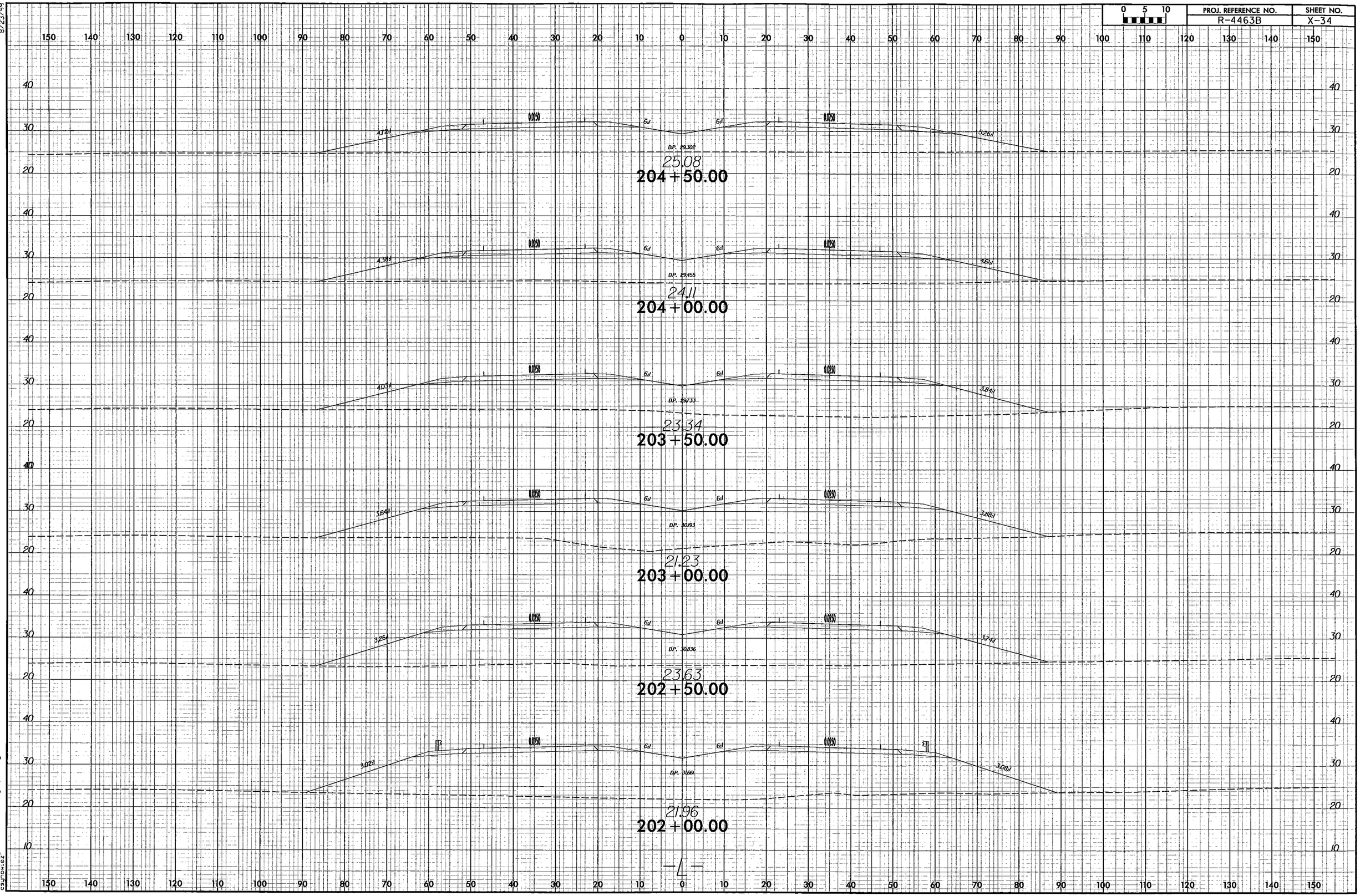
25.90

199+50.00

-L-

8/23/99

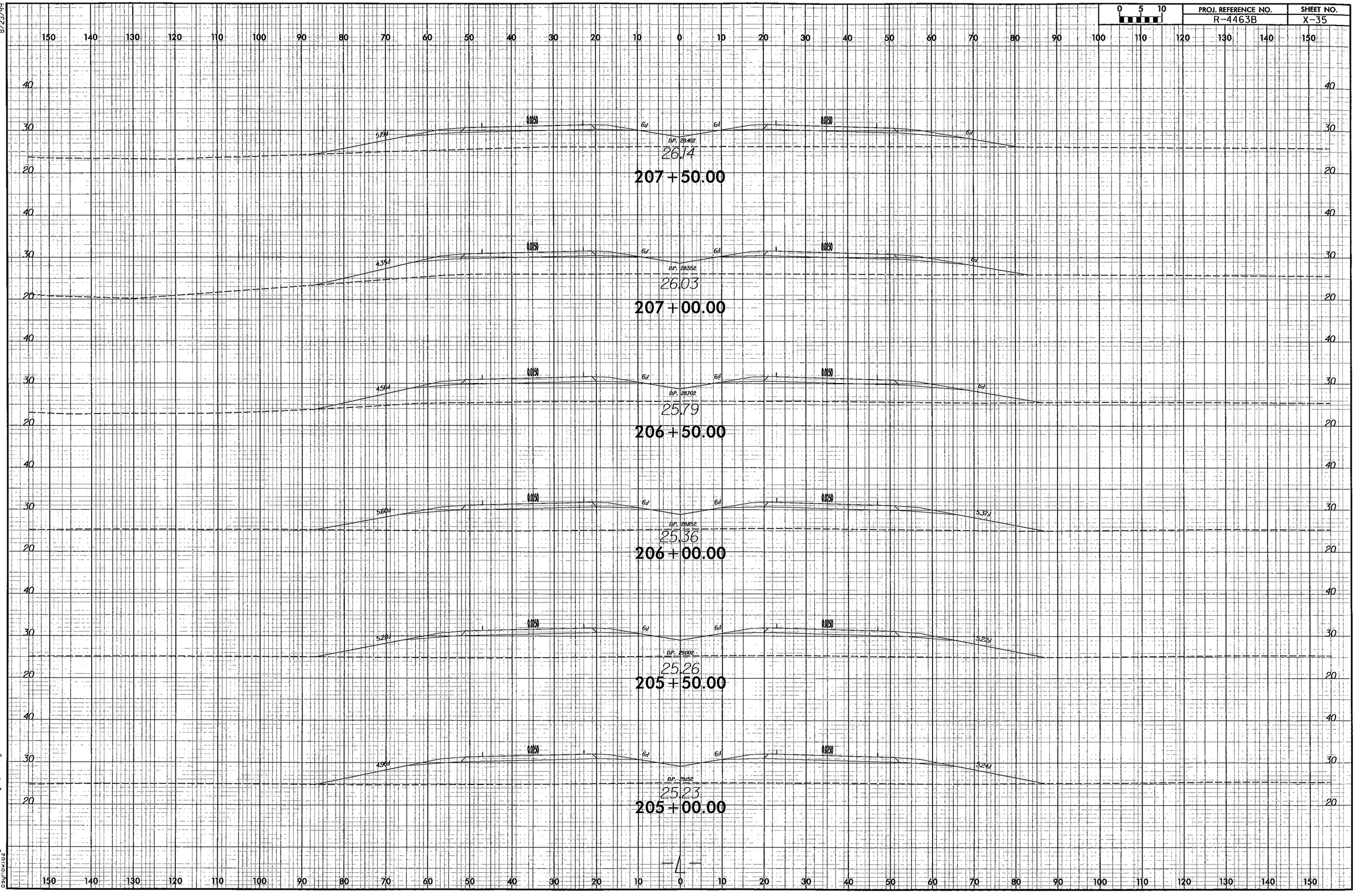
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-34



05\21\07 10:02:33
c:\roadeng\xsc\r-4463b_rdy_xpl_L.dgn
cjyoung

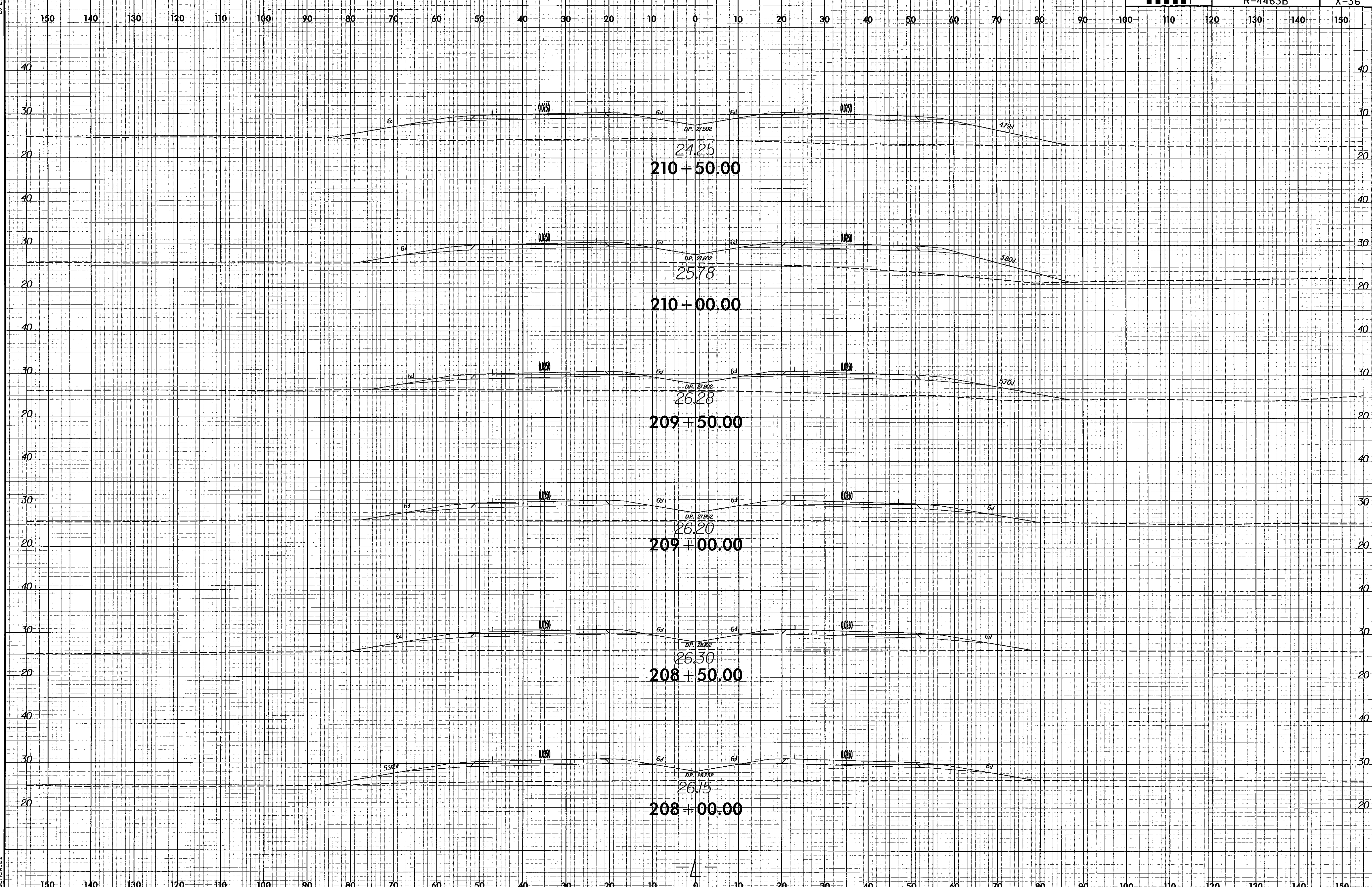
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-35

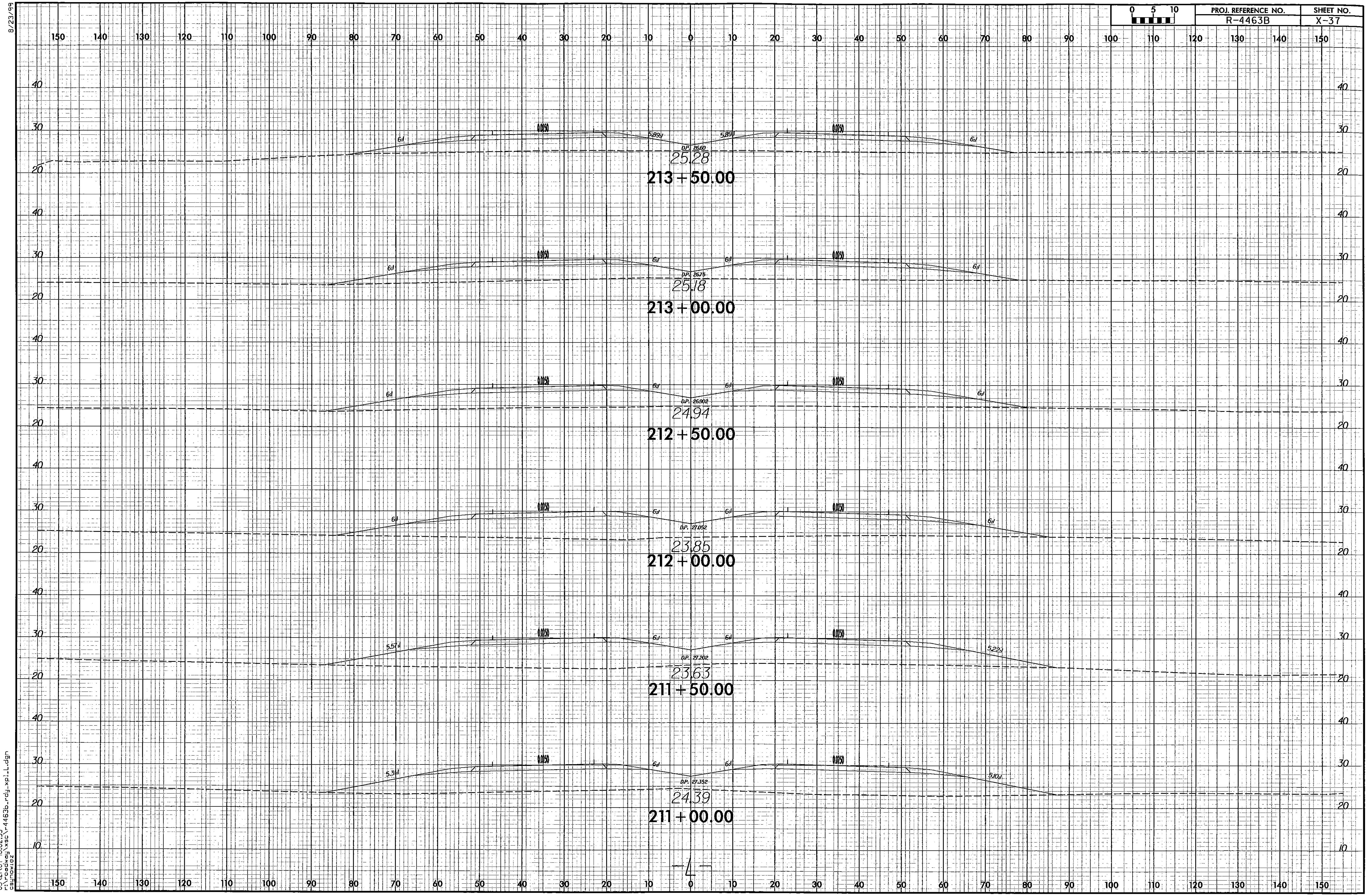


05-21-07 10:02:41
c:\projects\r4463b\r4463b_rdy_xpl.L.dgn
preferred

PROJ. REFERENCE NO. R-4463B
SHEET NO. X-36



8/23/99



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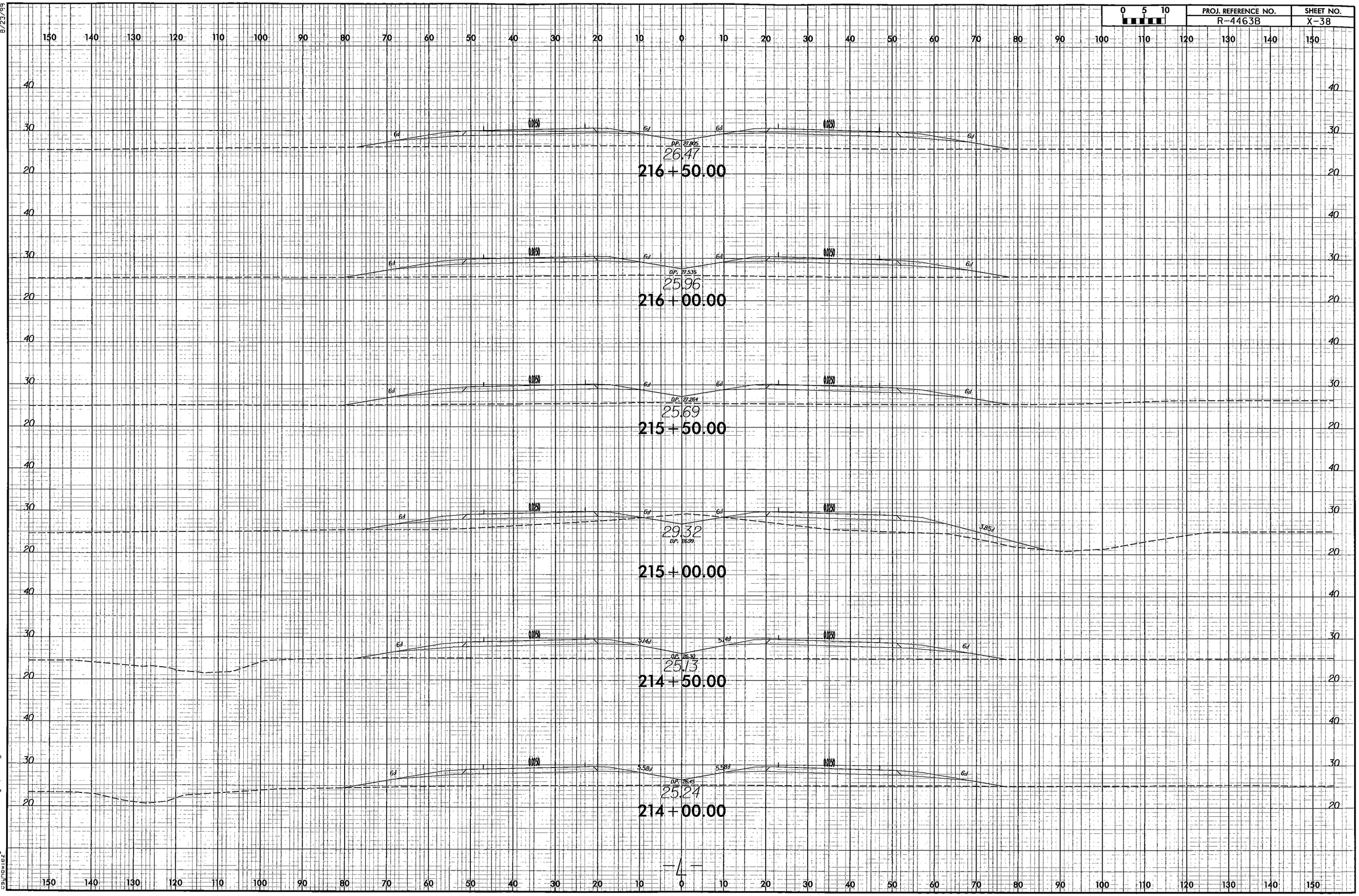
r:\roadway\xsc\-4463b_rdy_xpl_L.dgn
csgnowloz

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-38



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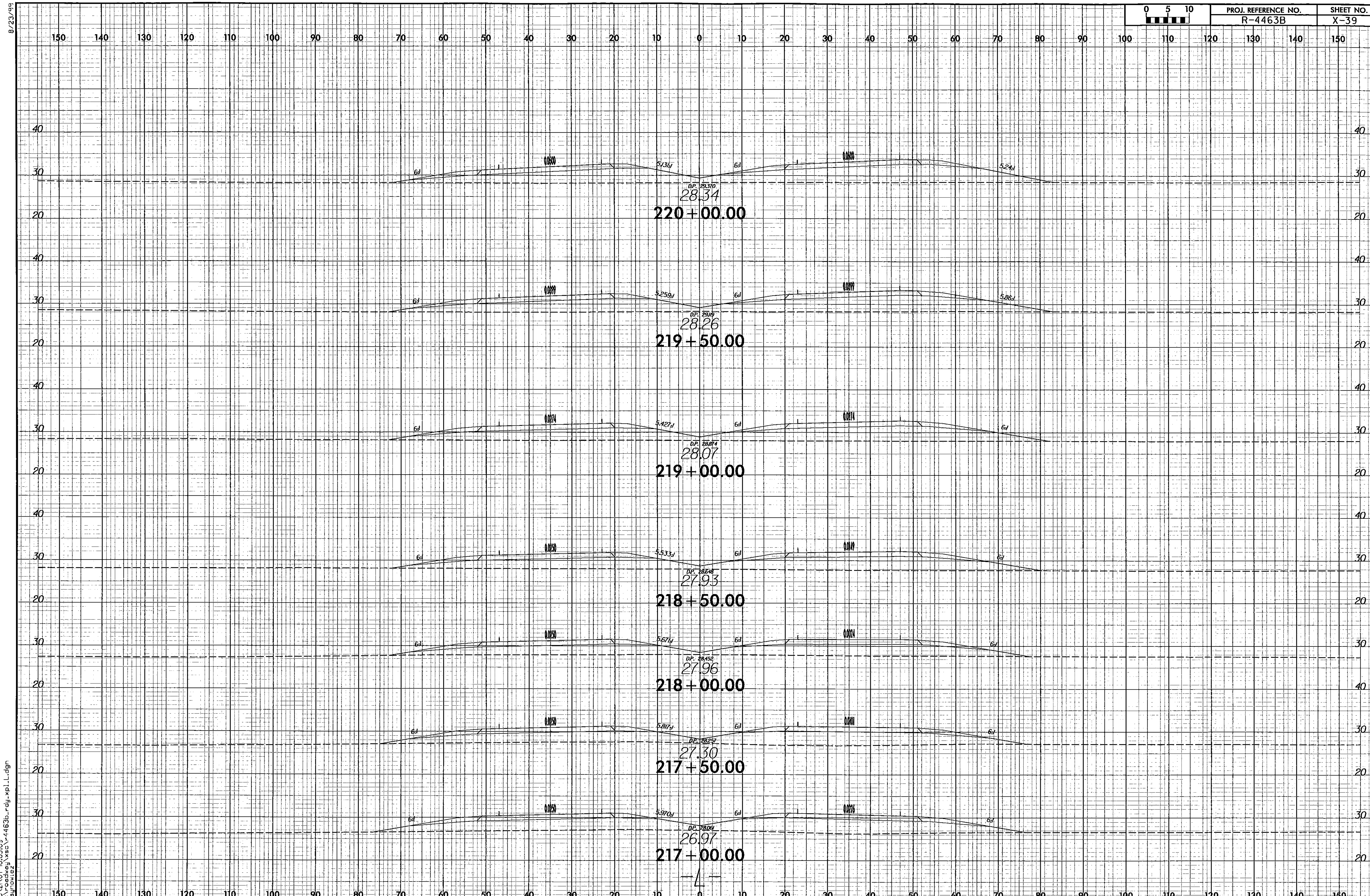
r:\roadway\xsc\r-4463b_rdy_xpl_L.dgn
rdy0002

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-39



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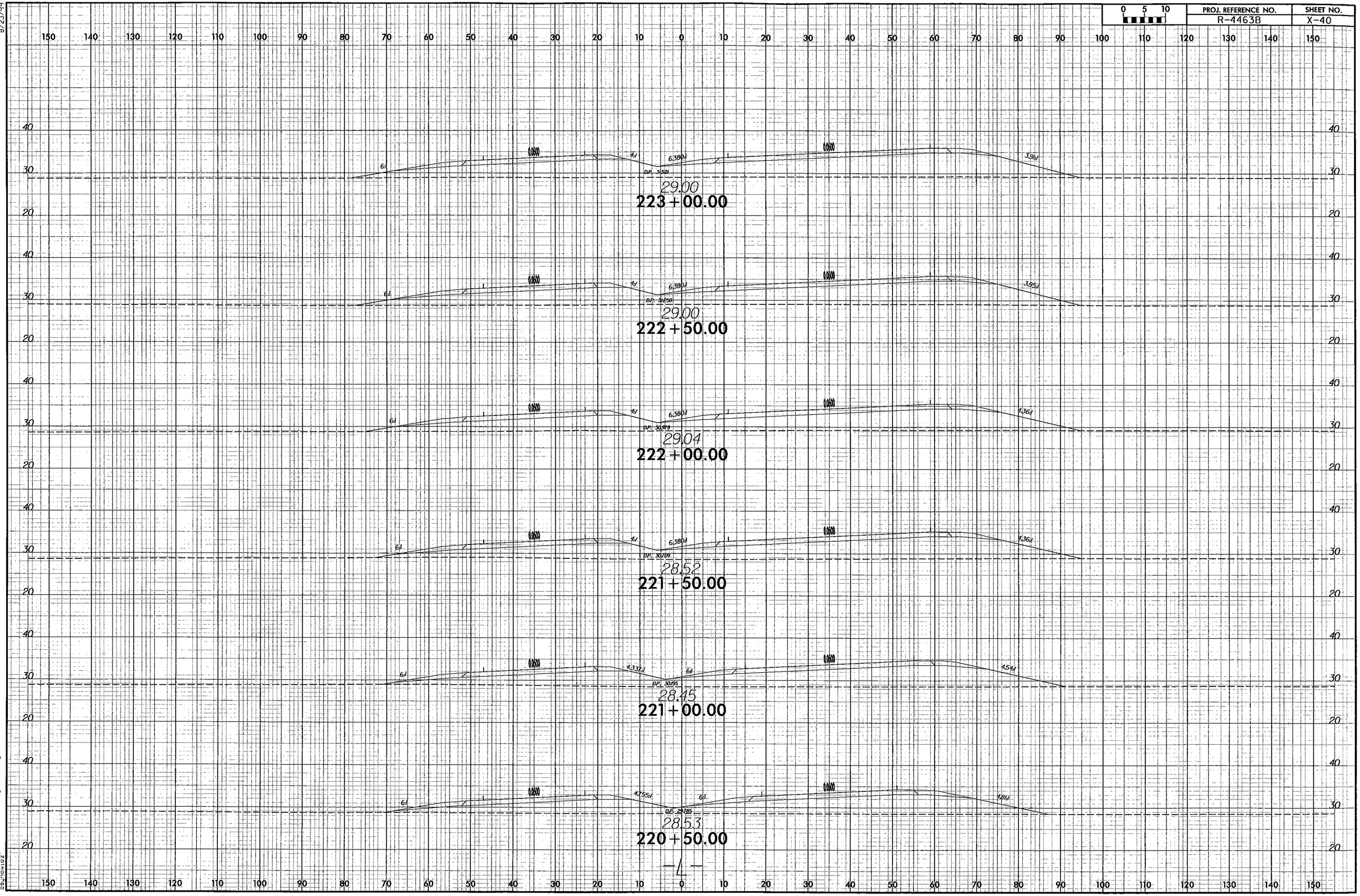
csynowiez

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-40



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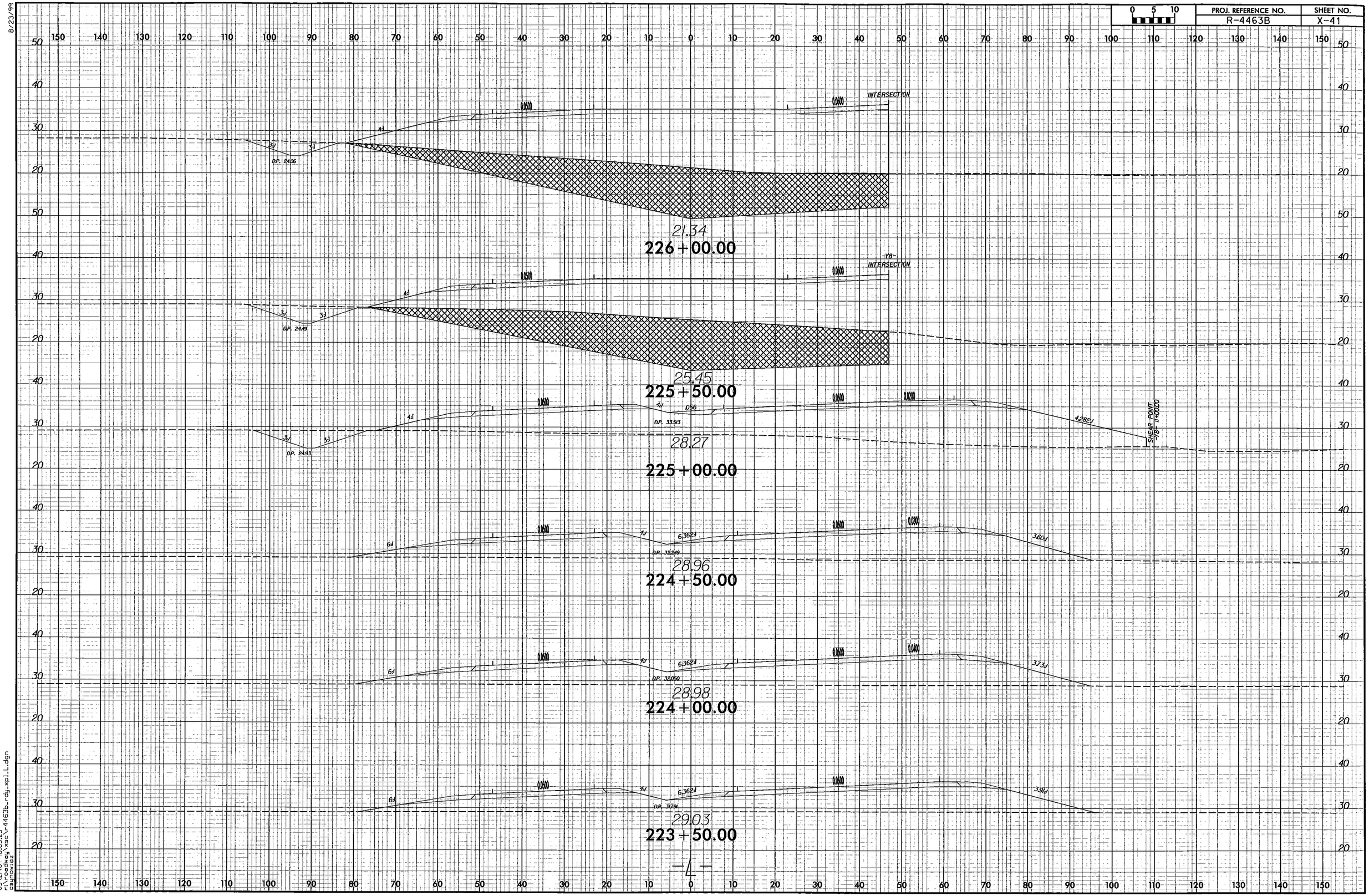
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-41



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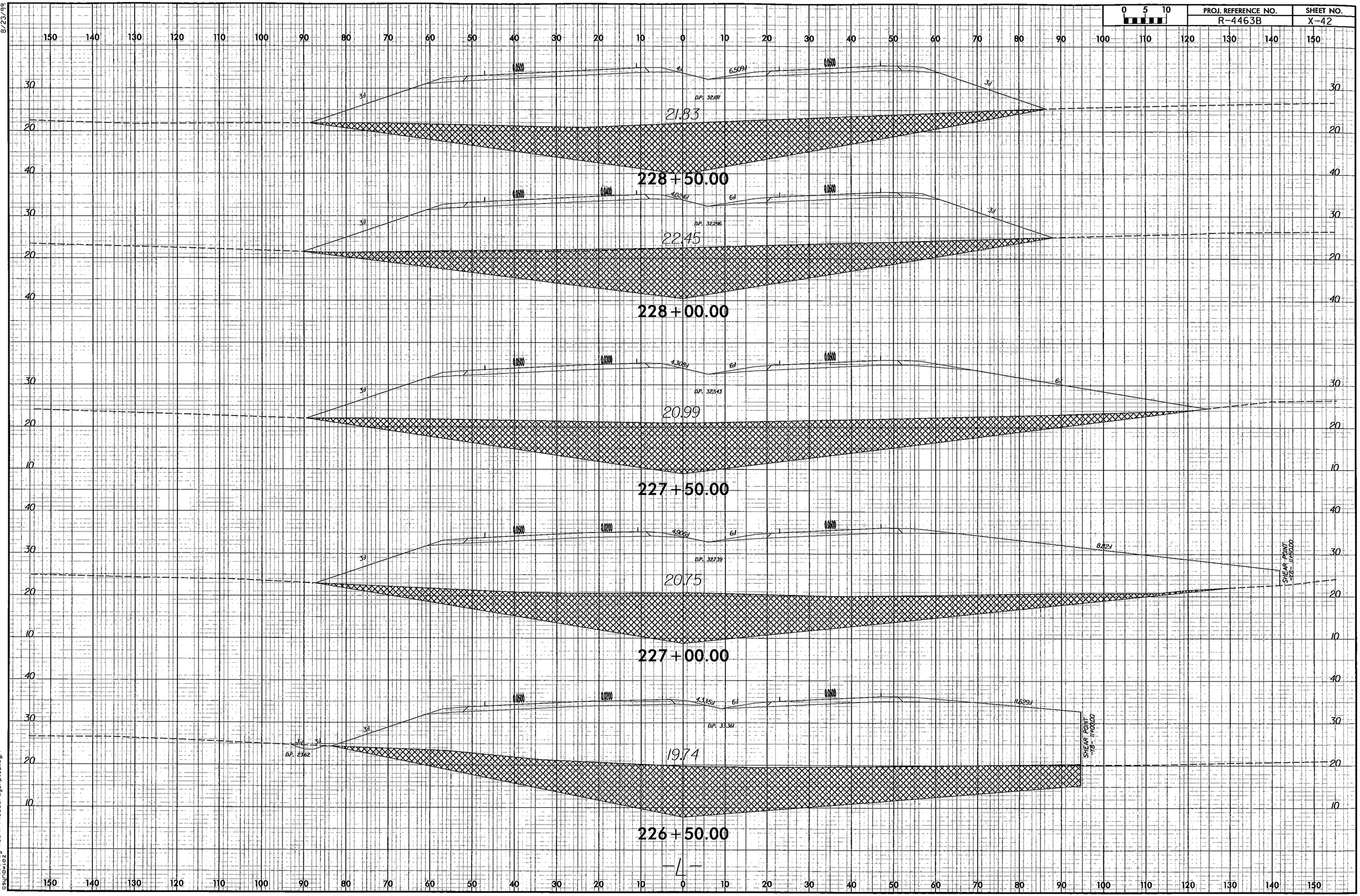
r:\roadway xsx\x4463b_rdy_xpll.dgn
esymonds

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-42



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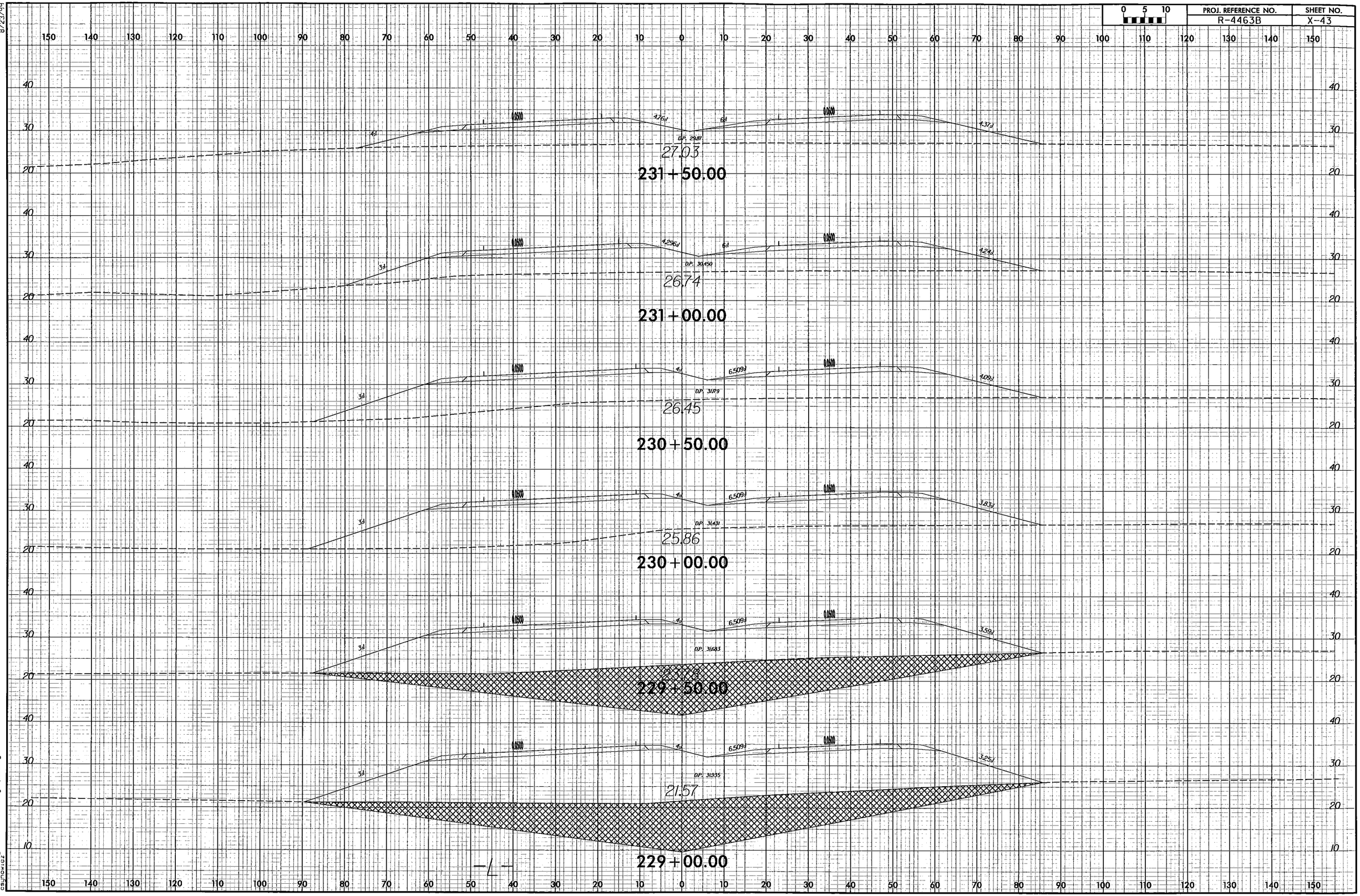
c:\projects\xsa\r4463b_rdy.xpl1.dgn
asumowtz

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-43



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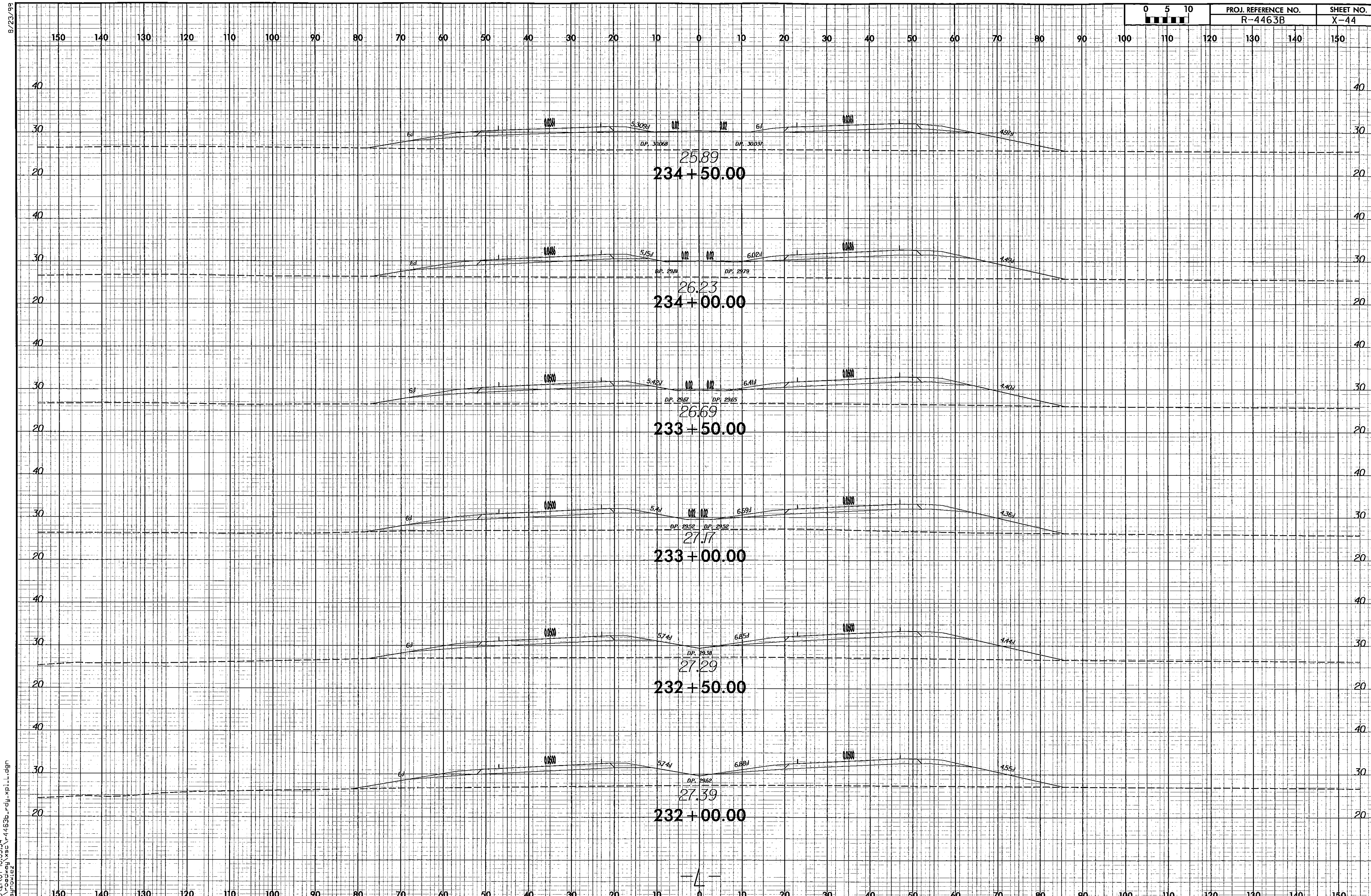
eaglewiz2

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-44



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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-45

25.72
237+50.00

26.03
237+00.00

25.96
236+50.00

25.83
236+00.00

25.69
235+50.00

25.69
235+00.00

05\21\07 10:04:02
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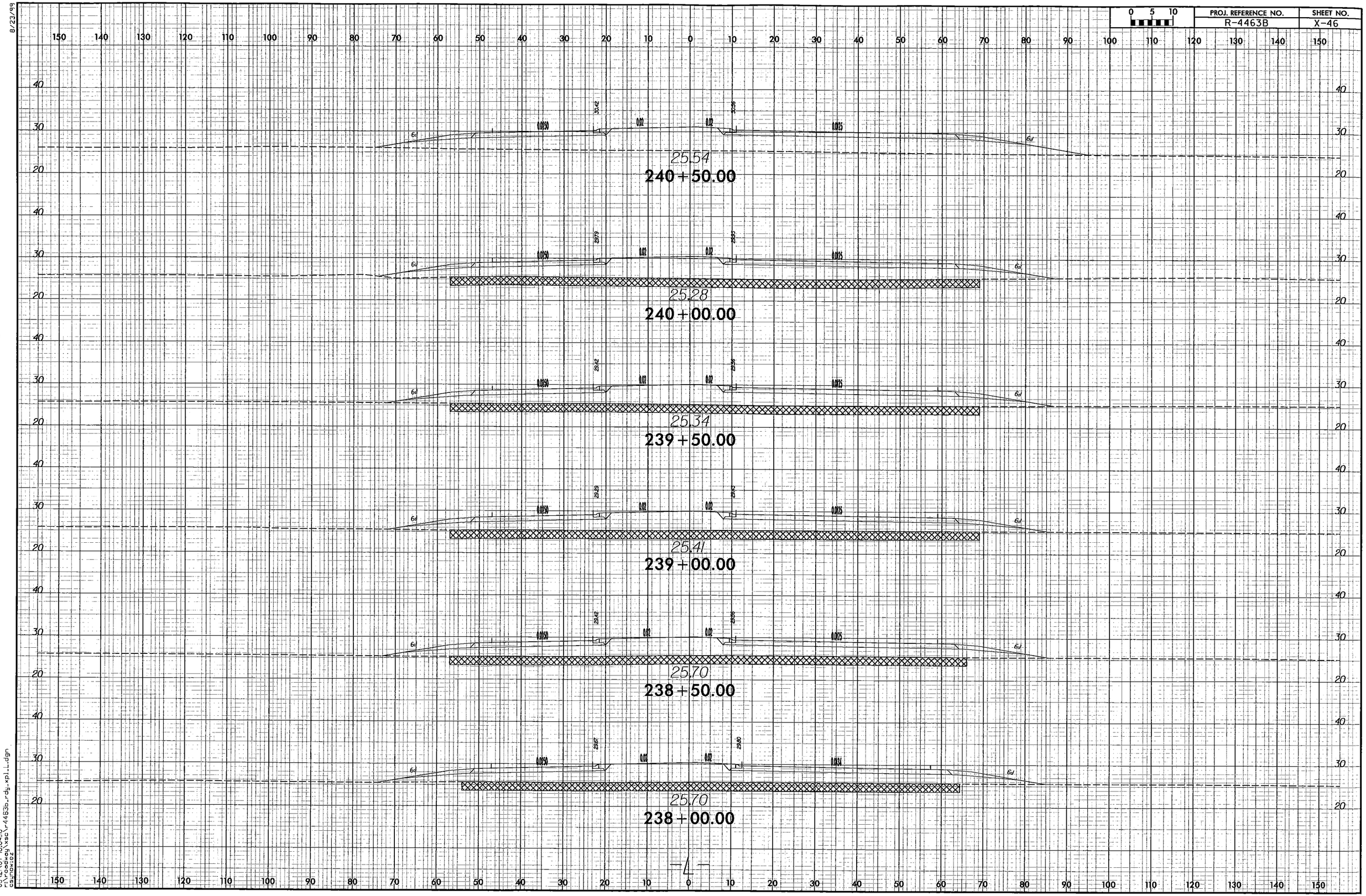
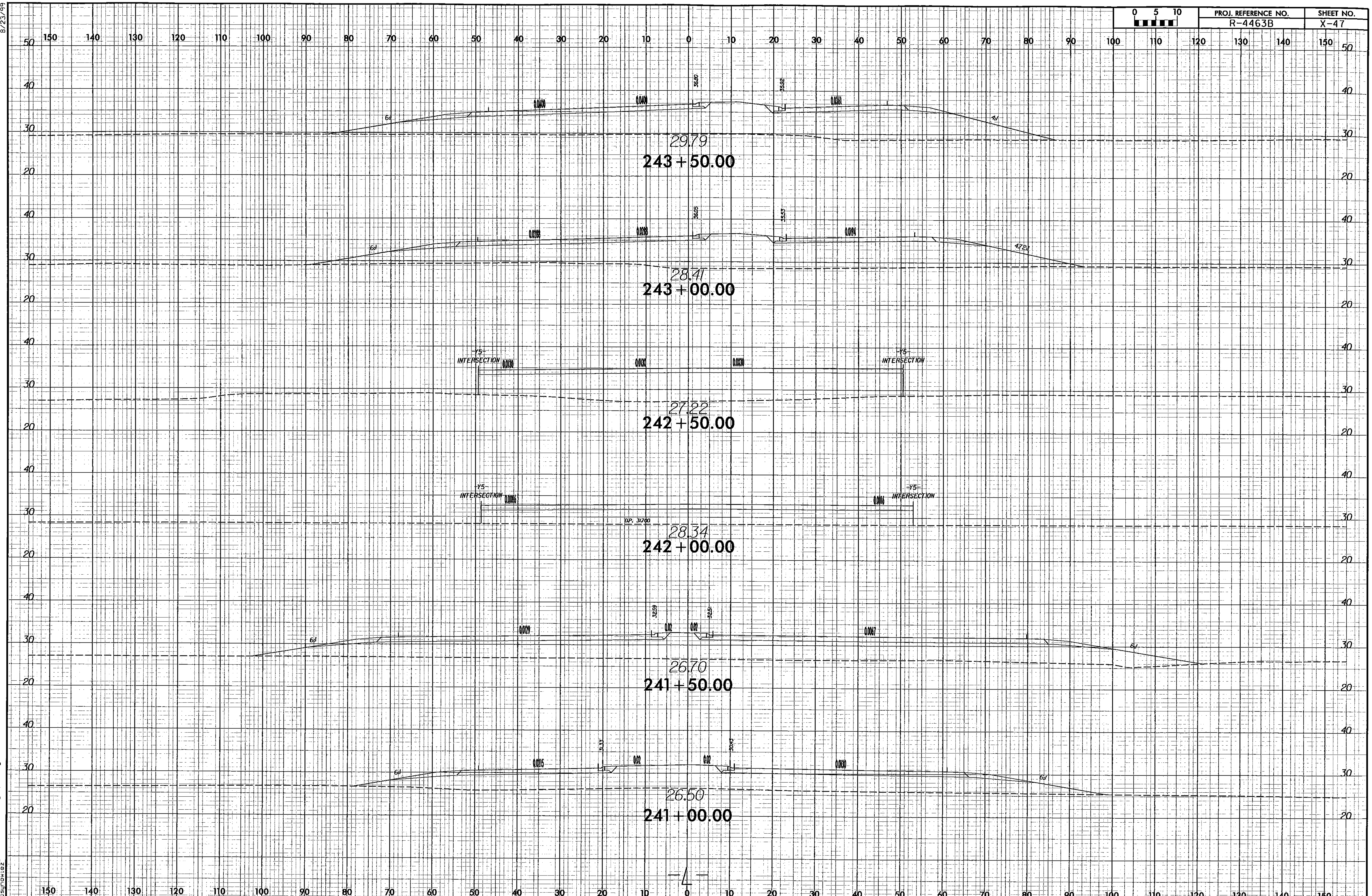
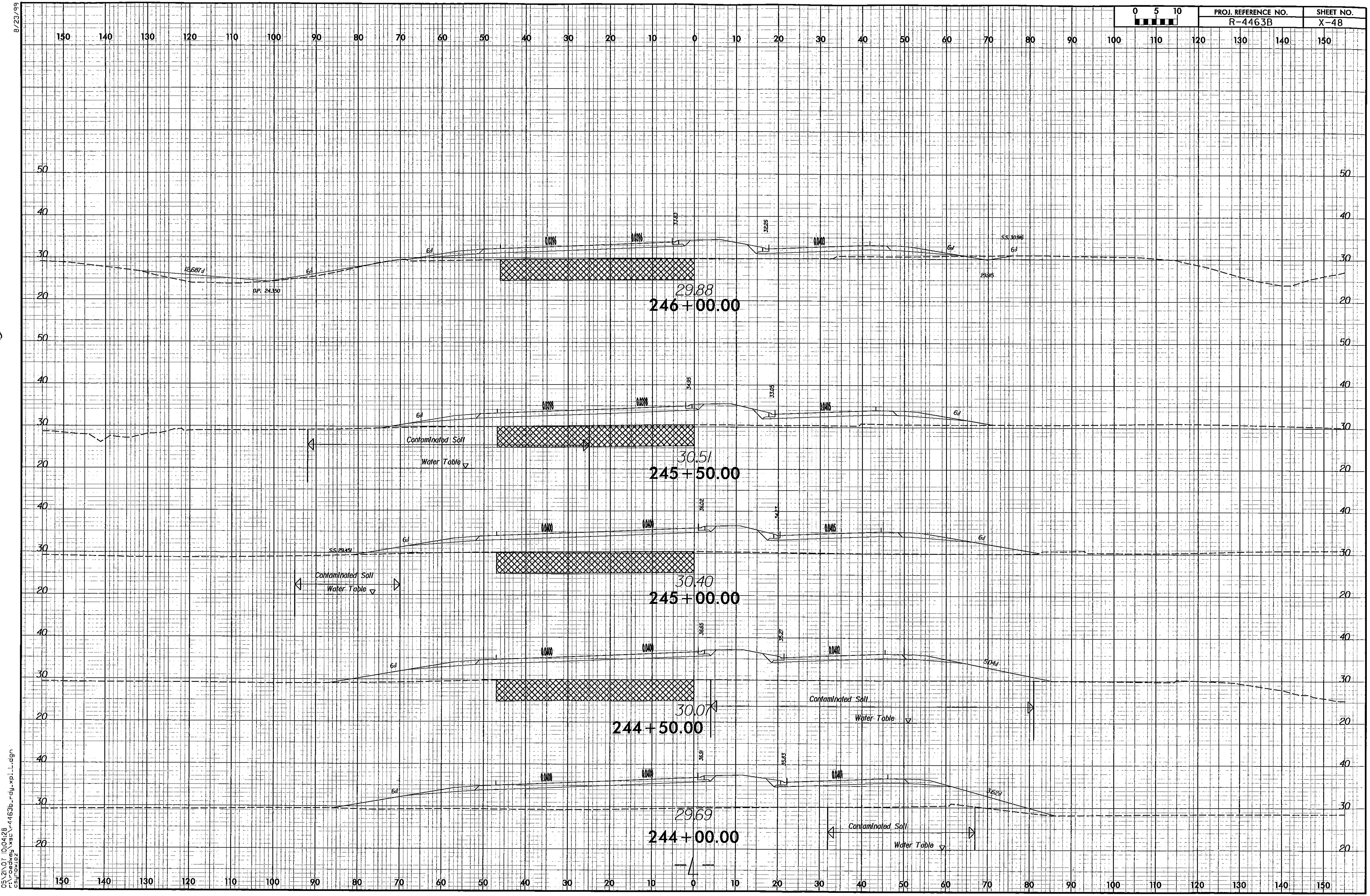
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-46




PROJ. REFERENCE NO.
R-4463B
SHEET NO.
X-47
8/23/99
29.79
243+50.00
28.41
243+00.00
-Y5-
INTERSECTION
27.22
242+50.00
28.34
242+00.00
26.70
241+50.00
26.50
241+00.00



8/23/99
0 5 10
PROJ. REFERENCE NO.
R-4463B
SHEET NO.
X-48
29.88
246+00.00
Contaminated Soil
Water Table
30.51
245+50.00
Contaminated Soil
Water Table
30.40
245+00.00
Contaminated Soil
Water Table
30.07
244+50.00
Contaminated Soil
Water Table
29.69
244+00.00
-4-
05\21\07 10:04:28
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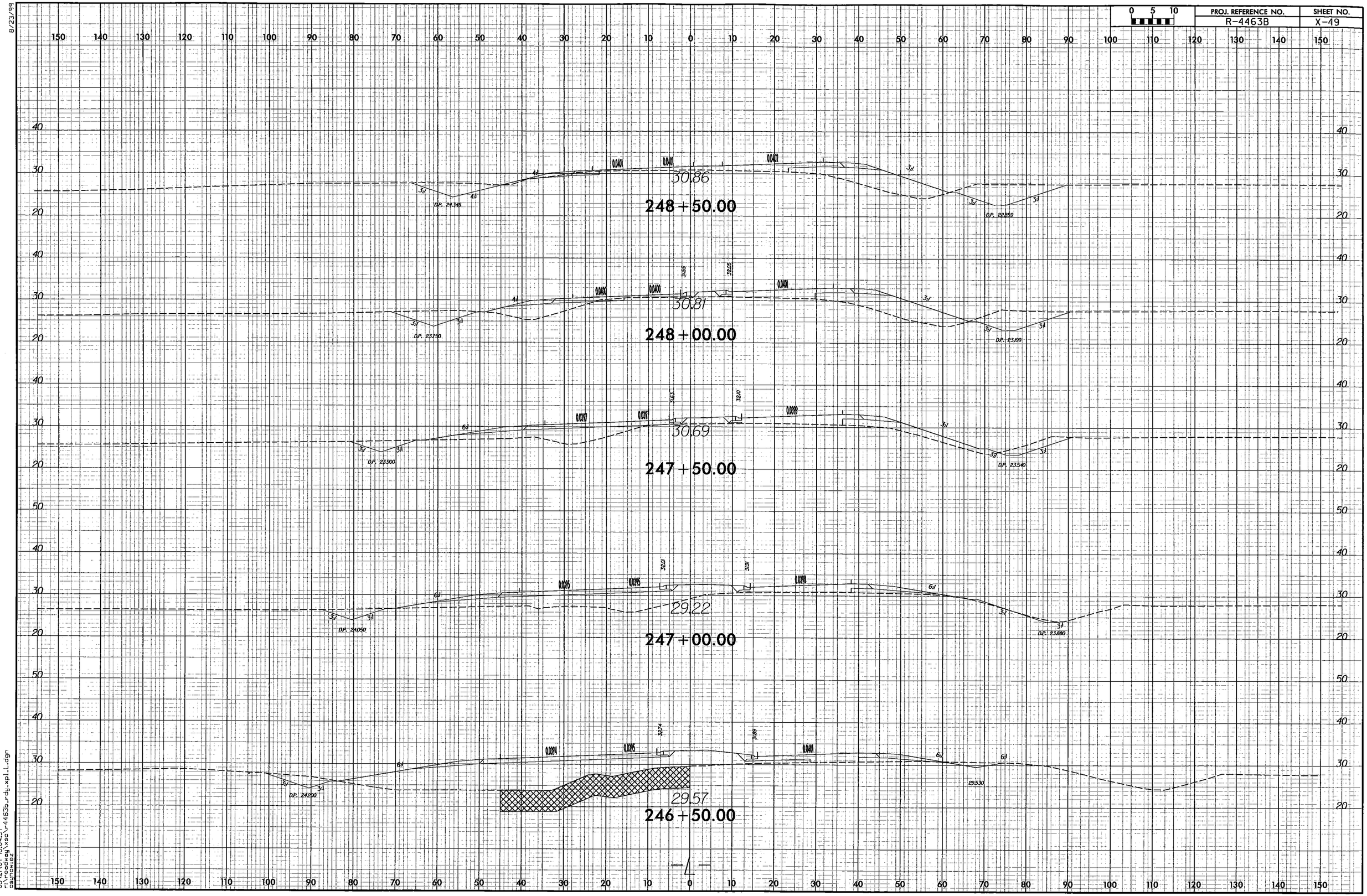
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-49



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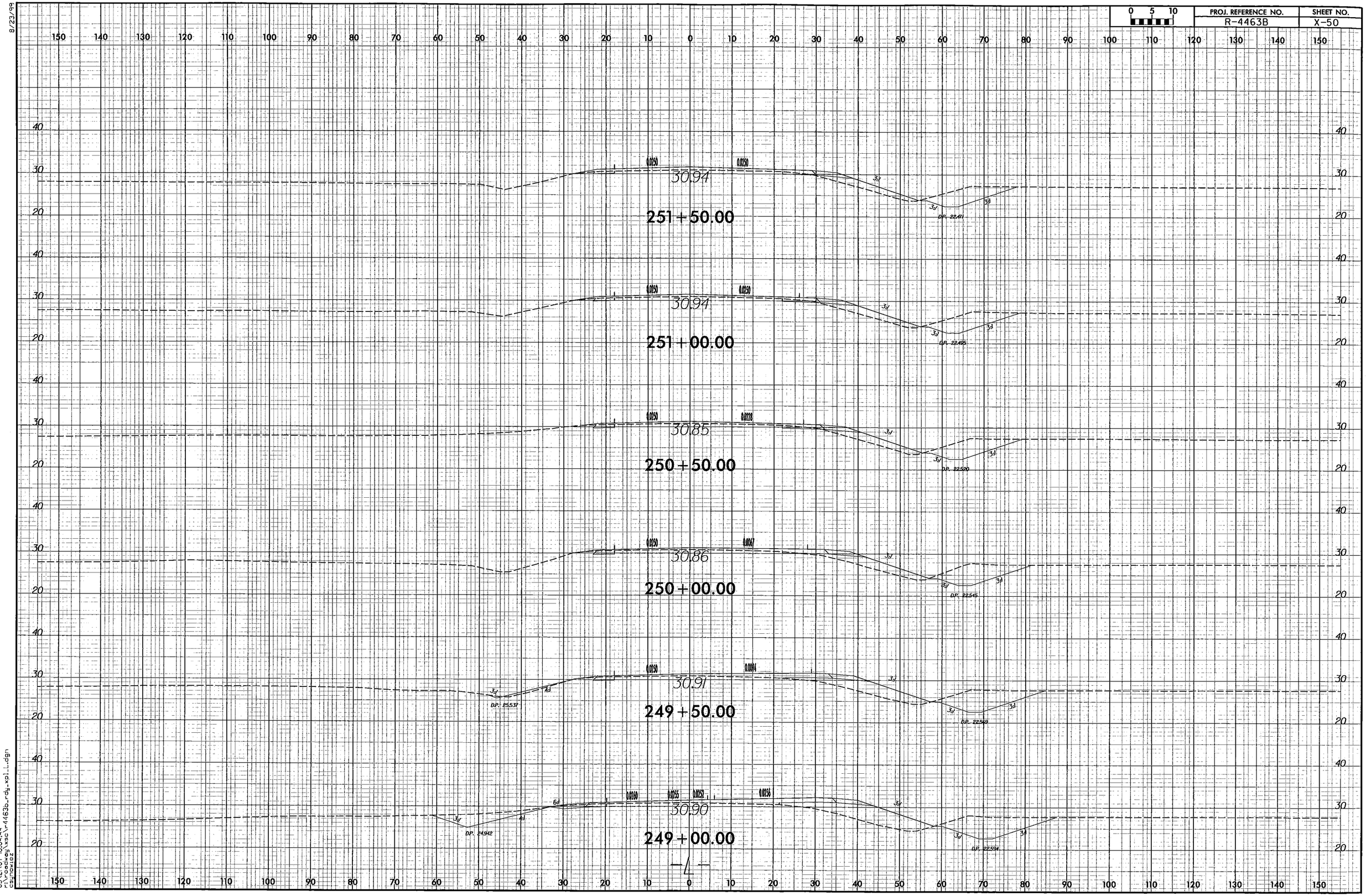
c:\projdg\xsc\r4463b_rdy_xpl_L.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-50



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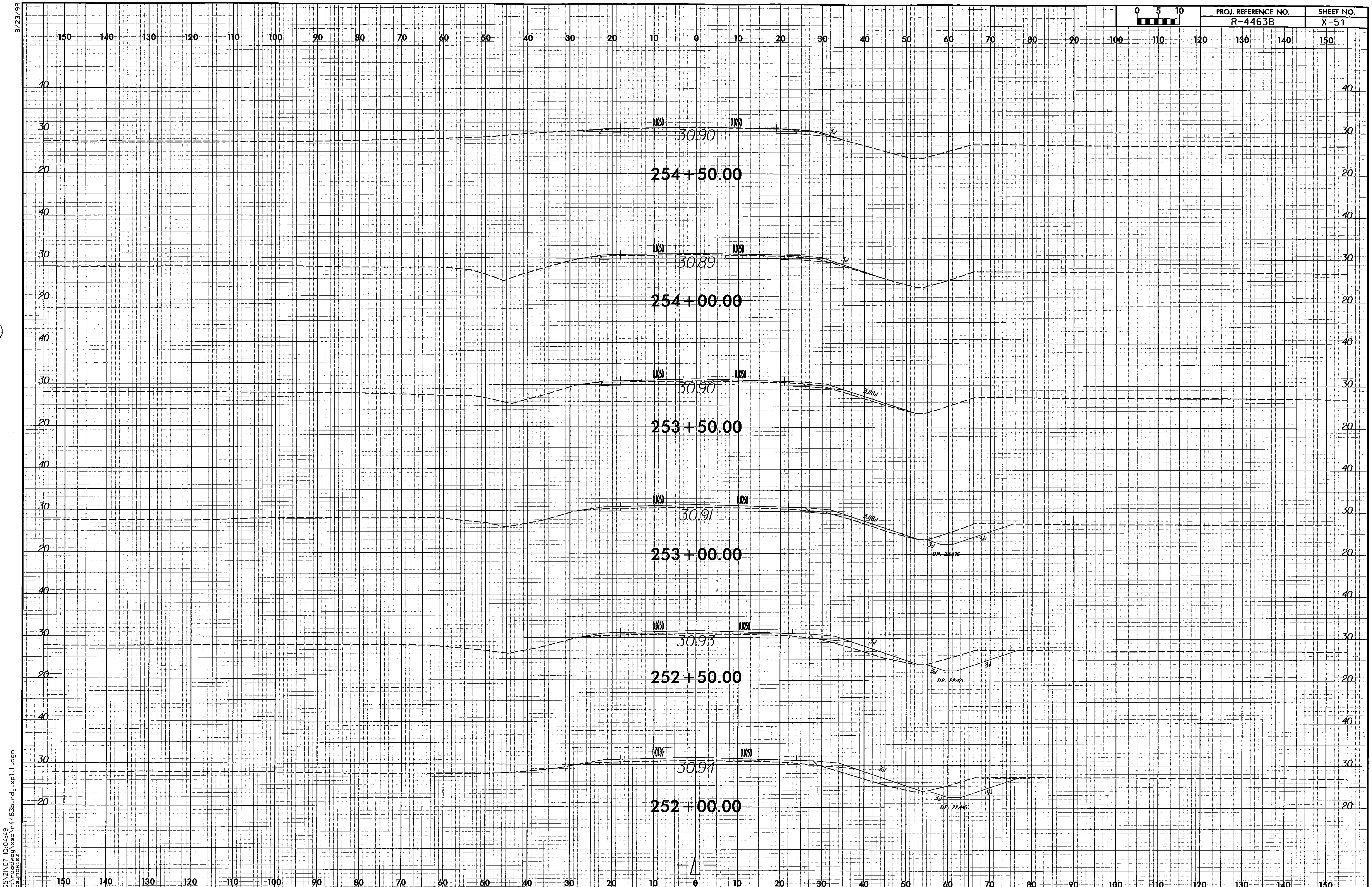
cgnovotz


PROJ. REFERENCE NO.
R-4463B
SHEET NO.
X-51
8/23/99
30.90
254+50.00
30.89
254+00.00
30.90
253+50.00
30.91
253+00.00
30.93
252+50.00
30.94
252+00.00
-4-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-52

30.71

256+50.00

30.77

256+00.00

30.80

255+50.00

30.86

255+00.00

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-53

28.24
44+00.00

28.11
43+50.00

27.87
43+00.00

27.62
42+50.00

27.39
42+00.00

26.95
41+50.00

-Y3-

05\21\07 10:05:06
c:\roadway\xsec\r-4463b_rdy_xpl_Y3.dgn
cswing2

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-54

27.35
47+00.00

27.35
46+50.00

27.70
46+00.00

28.56
45+50.00

28.58
45+00.00

28.41
44+50.00

-Y3-

05\21\07 10:05:10
c:\projects\xsec\r4463b_rdy_xpl_Y3.dgn
rdyplot2

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-55

28.23
50+00.00

28.29
49+50.00

27.89
49+00.00

27.79
48+50.00

27.81
48+00.00

27.54
47+50.00

-Y3-

05\21\07 10:05:16
c:\projects\r4463b_rdy_xsl_Y3.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-56

27.80
52+00.00

27.70
51+50.00

27.61
51+00.00

27.74
50+50.00

-Y3-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-57

27.38

54+00.00

-RPB- 10+39.02

0.025

0.025

6:1

27.39

53+50.00

-RPB- 10+49.83

0.0139

6:1

-RPC- 13+40.97

0.0096

1:1

27.18

53+00.00

-RPB- 0.0000

0.0250

5.99:1

-RPC- 12+90.49

0.0098

5.01:1

27.57

52+50.00

0.0250

5.95:1

-RPC- 12+40.06

0.0099

6:1

-Y3-

05\12\07 10:05:26
C:\projects\r4463b-rdy-xsl-Y3.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-58

27.86

57+00.00

6:1

4.38:1

22.40

27.94

56+50.00

6:1

4.47:1

-RPB- 13+60.48

27.92

56+00.00

6:1

-RPB- 12+50.17

27.85

55+50.00

6:1

-RPB- 12+00.17

27.70

55+00.00

6:1

-RPB- 11+46.39

27.58

54+50.00

-Y3-

05\21\07 10:05:32
c:\projects\rdy\vsc\r-4463b_rdy_xpl_Y3.dgn
csurface

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-59

27.62
60+50.00

27.33
60+00.00

27.07
59+50.00

27.12
59+00.00

27.64
58+50.00

27.75
58+00.00

27.77
57+50.00

-Y3-

05\21\07 10:05:38
c:\projects\vsc\r-4463b_rdy_xpl_Y3.dgn
cjurney

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-60

27.68
64+00.00

27.76
63+50.00

27.77
63+00.00

27.88
62+50.00

28.01
62+00.00

28.03
61+50.00

27.81
61+00.00

-LPC- 10+86.88

-LPC- 11+37.48

60/d

60/d

-Y3-

05\21\07 10:05:41
r:\roadway\xsc\r-4463b_rdy_xpl_Y3.dgn
saltonwoz

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-61

28.10
67+00.00

27.91
66+50.00

27.78
66+00.00

27.65
65+50.00

27.30
65+00.00

27.36
64+50.00

-Y3-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-62

27.36
70+00.00

27.52
69+50.00

27.62
69+00.00

27.83
68+50.00

28.14
68+00.00

28.12
67+50.00

-Y3-

05\2\07 10:05:51
c:\projects\esc\r4463b_rdy_xpl_Y3.dgn
cshipman

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-63

27.83
73+00.00

27.85
72+50.00

27.52
72+00.00

27.30
71+50.00

27.06
71+00.00

27.41
70+50.00

-Y3-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-64

27.79
76+00.00

27.90
75+50.00

28.11
75+00.00

28.12
74+50.00

27.92
74+00.00

27.87
73+50.00
-Y3-

0.025D

6:1

05\21\07 10:06:01
c:\roadway\xsc\r-4463b_rdy_xpl_Y3.dgn
cshumake

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-65

27.91
79+00.00

27.72
78+50.00

27.47
78+00.00

27.29
77+50.00

27.34
77+00.00

27.54
76+50.00

-Y3-

05\21\07 10:06:06
r:\roadway\xsc\r4463b_rdy_xpl_Y3.dgn
csgrowlez

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-66

27.34
83+00.00

27.41
82+50.00

27.67
82+00.00

27.68
81+50.00

27.70
81+00.00

27.71
80+50.00

0.0250
6:1

27.86
80+00.00

0.0250
6:1

27.83
79+50.00

0.0250
6:1

-Y3-

05\21\07 10:06:11
c:\roadway\xsc\r-4463b_rdy_xpl_Y3.dgn
dsayrow102

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-67

0 5 10

28.26
85+50.00

28.20
85+00.00

27.94
84+50.00

27.49
84+00.00

27.27
83+50.00

-Y3-

05\21\07 10:06:15
r:\roadway\xsc\r-4463b_rdy_xpl_Y3.dgn
pgeorge22

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-68

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

50 40 30 20

RPA-12+56.20

0.025 0.025

5:1 3:1 2378

28.17

87+50.00

50 40 30 20

RPA-13+40.24

0.025 0.025

5:1 3:1 2372

27.73

87+00.00

50 40 30 20

RPA-13+15.29

0.030 0.030

5:1 3:1 2366

27.85

86+50.00

50 40 30 20

RPA-14+00.35

0.027 0.026

5:1 3:1 2360

28.16

86+00.00

-Y3-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

05\21\07 10:06:21
c:\roadway\xsc\r-4463b_rdy_xpl_Y3.dgn
rdy_xpl_v8

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-69

-RPA- 11+50.04

0.025 0.025

64

27.72

89+50.00

-RPA- 11+00.08

0.025 0.025

67.14

27.36

89+00.00

-RPA- 11+50.12

0.025 0.025

54

39

23.90

27.94

88+50.00

-RPA- 12+00.16

0.025 0.025

54

39

23.84

28.29

88+00.00

-Y3-

05/21/07 10:06:27
c:\projects\xsec\r4463b_rdy_xs1_Y3.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-70

27.99
92+50.00

28.11
92+00.00

28.34
91+50.00

30.58
91+00.00

28.37
90+50.00

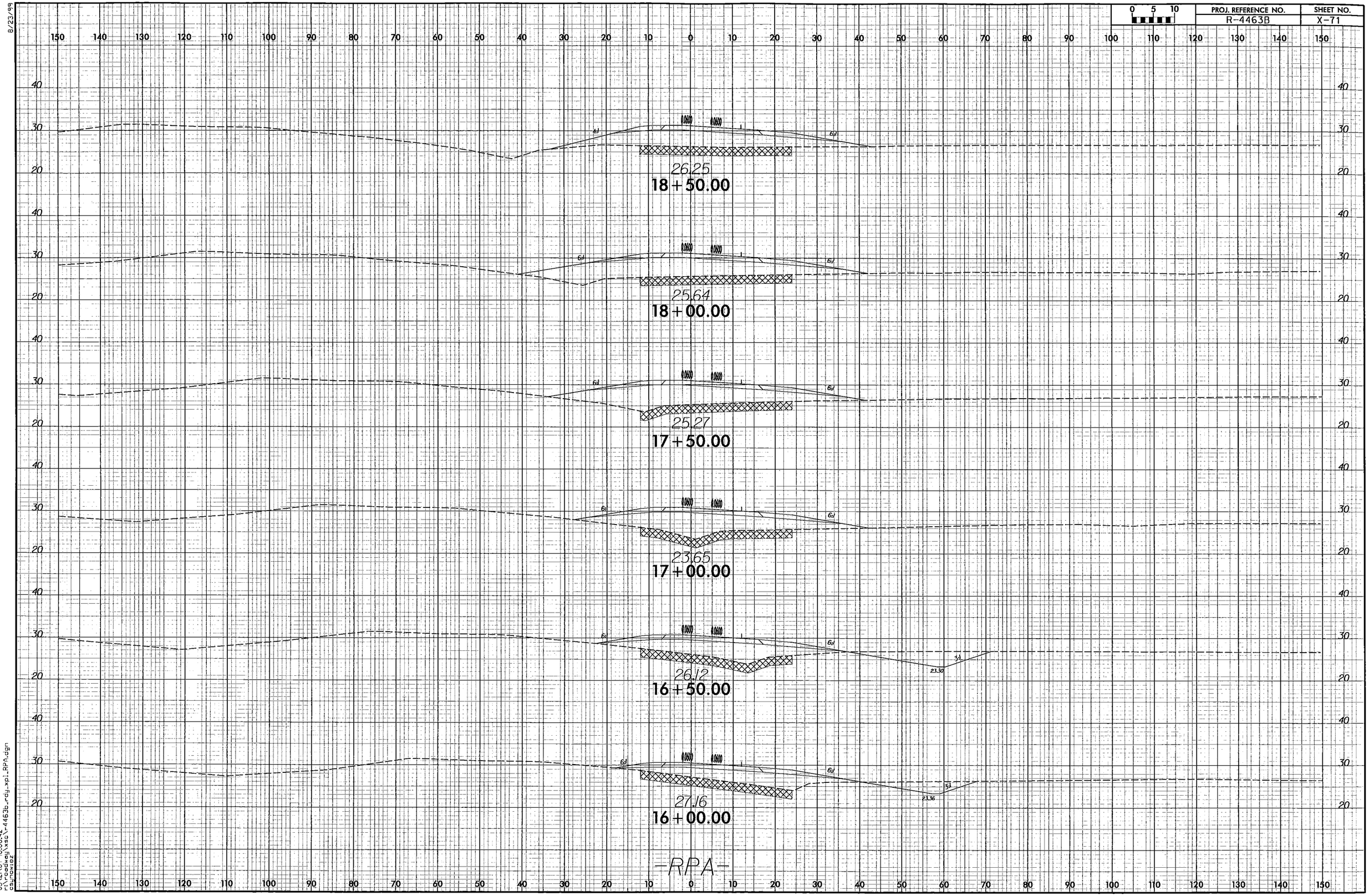
28.24
90+00.00

-Y3-

05\21\07 10:06:32
r:\roadwy\xsc\r4463b_rdy_xpl_Y3.dgn
cshowtoz

8/23/99

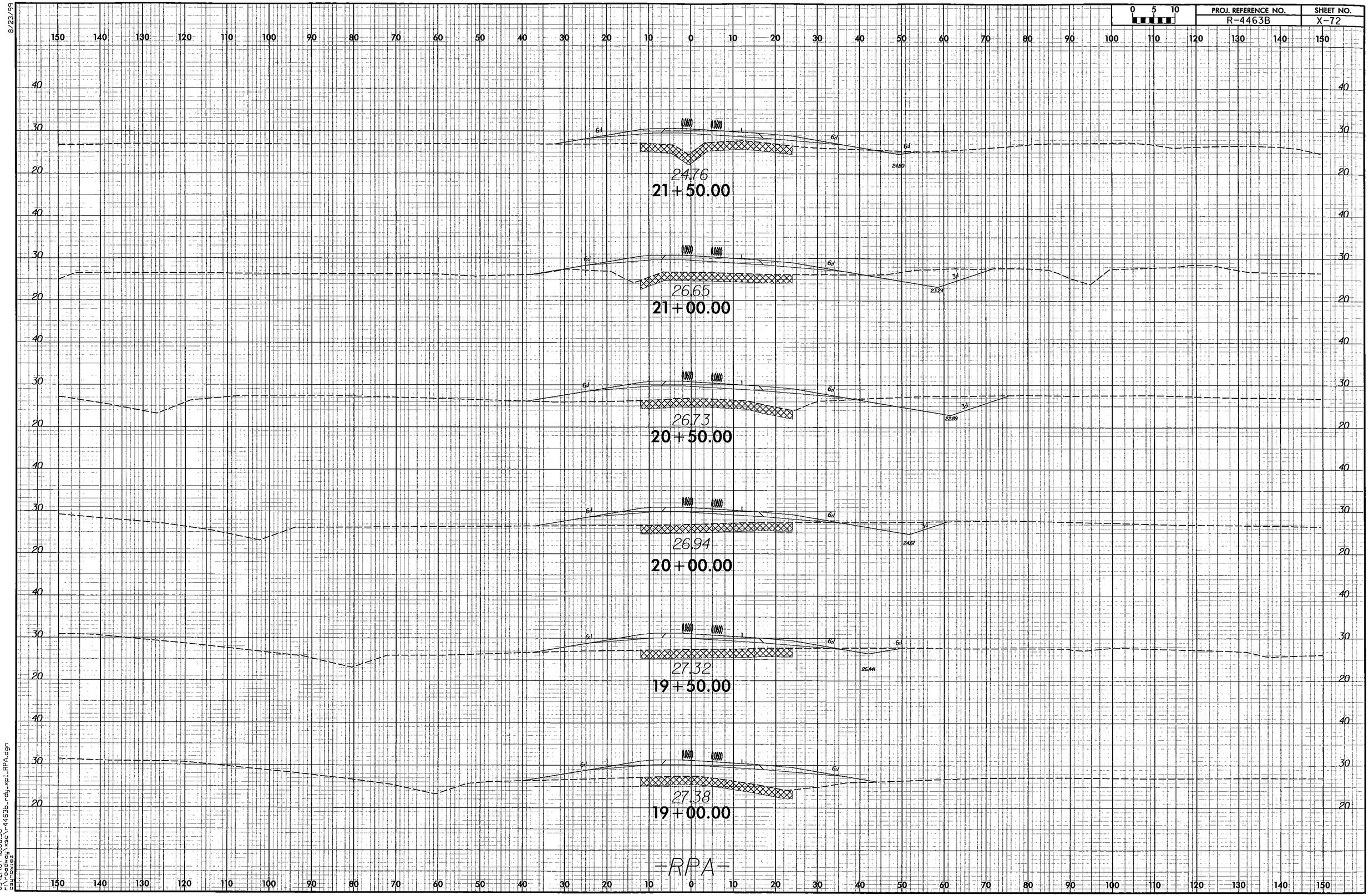
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-71



05\21\07 10:06:42
r:\roadway\xsc\r4463b_rdy_xpi_RPA.dgn
pgconnor

8/23/99

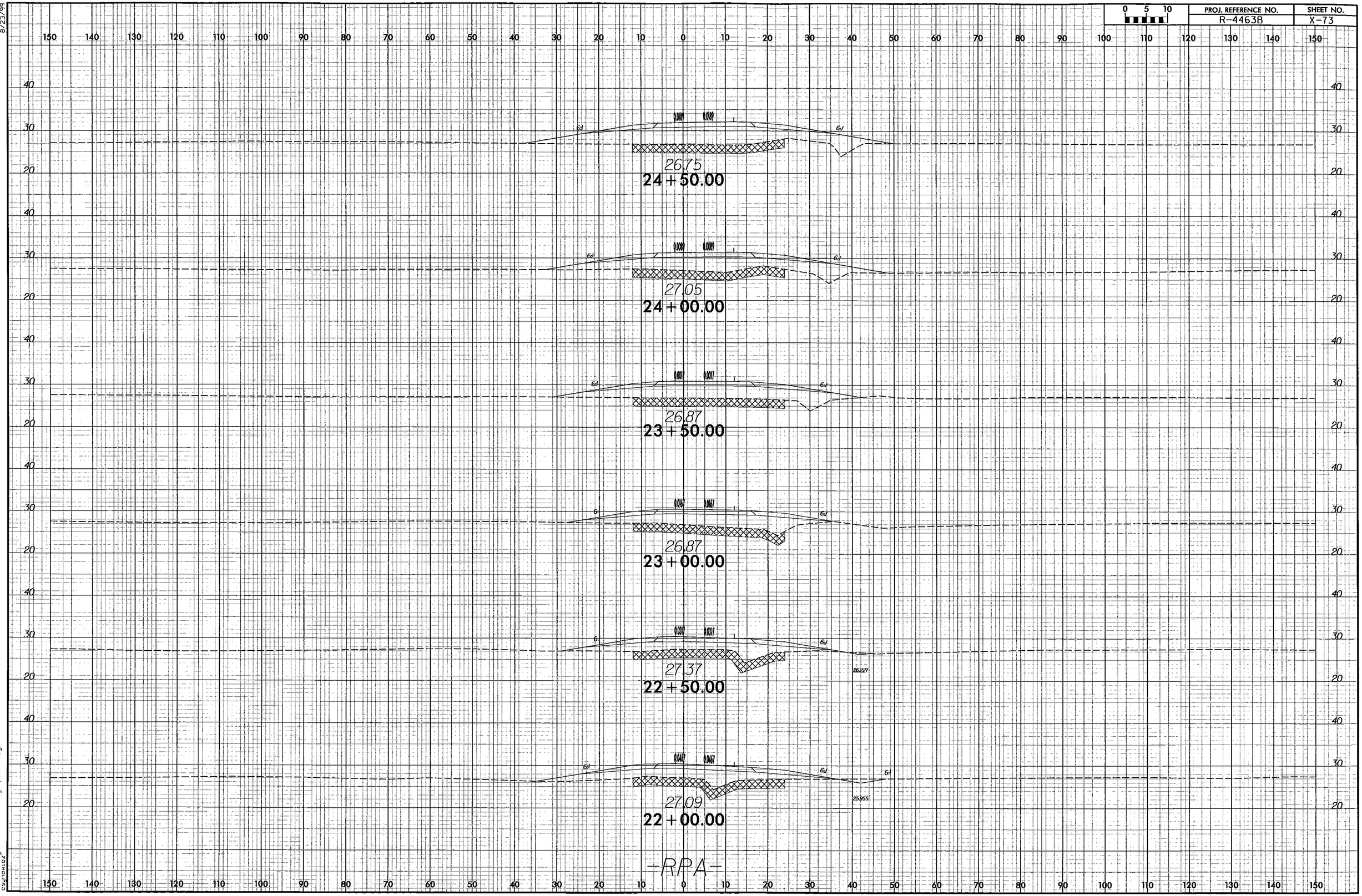
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-72



05\2\07 10:08:50
r:\roadway\xsec\r4463b_rdy_xpl_RPA.dgn
rdy
Bentley Systems, Inc.

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-73



05\21\07 10:06:59
r:\roadway\x4463b_rdy_xpl_RPA.dgn
asymonte2

B/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-74

27.47
27+50.00

27.69
27+00.00

27.55
26+50.00

27.46
26+00.00

27.25
25+50.00

27.04
25+00.00
-RPA-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-75

27.54
29+50.00

27.62
29+00.00

27.04
28+50.00

27.44
28+00.00
-RPA-

05\21\07 10:07:11
r:\roadway\xsc\r-4463b_rdy_xpl_RPA.dgn
cumbaniz

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-76

30.32

12+50.00

30.69

12+00.00

30.83

11+50.00

30.90

11+00.00

30.92

10+50.00

30.91

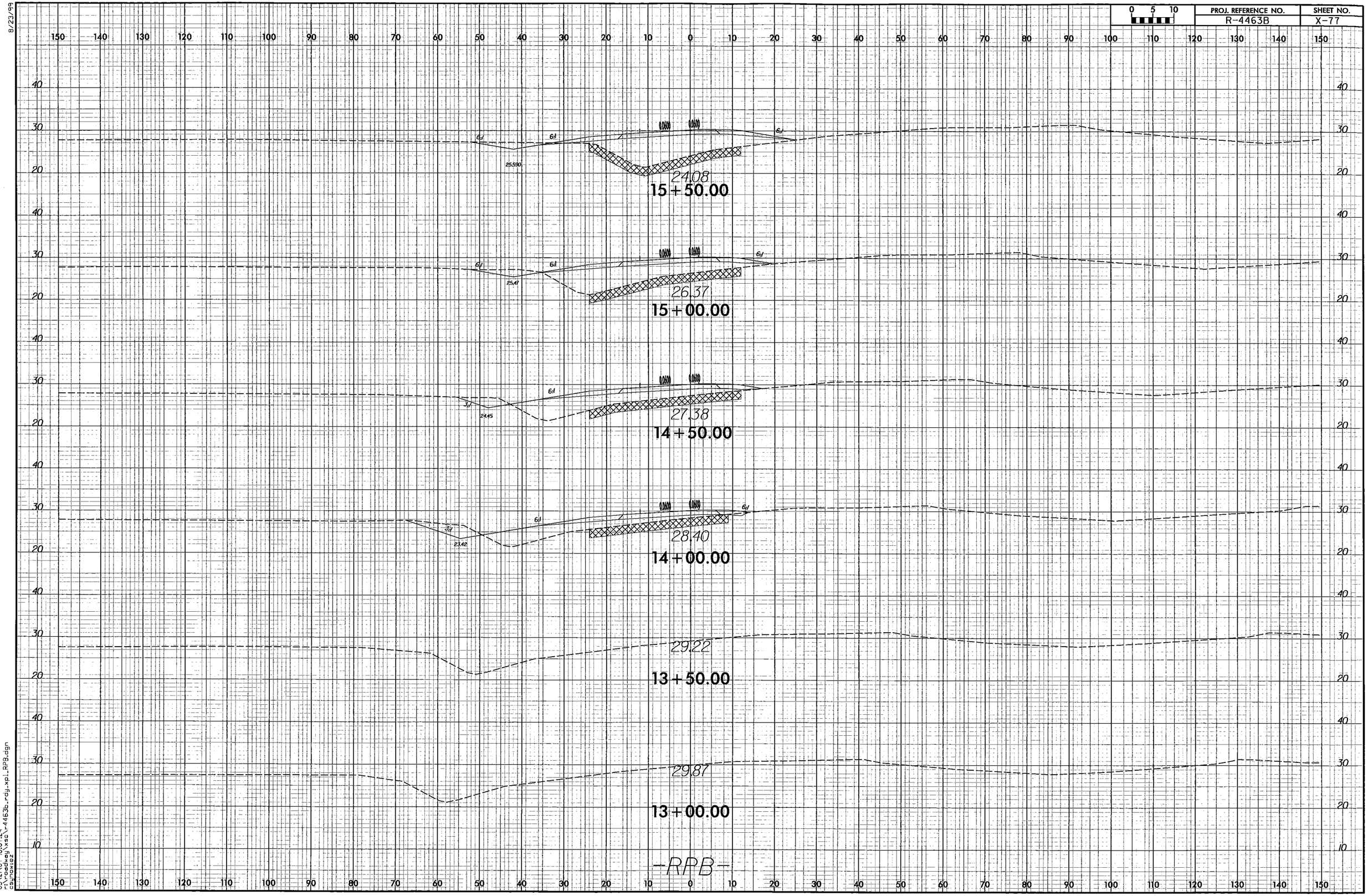
10+00.00

-RPB-

05\21\07 10:07:19
r:\roadway\rsc\r4463b_rdy_xpl_RPB.dgn
rdy0002

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-77



05/21/07 10:07:24
C:\projects\r4463b\rdy_xsl_RPB.dgn

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-78

0 5 10

27.13
26.490
18+50.00

27.26
26.340
18+00.00

27.13
26.630
17+50.00

26.92
26.040
17+00.00

26.95
25.830
16+50.00

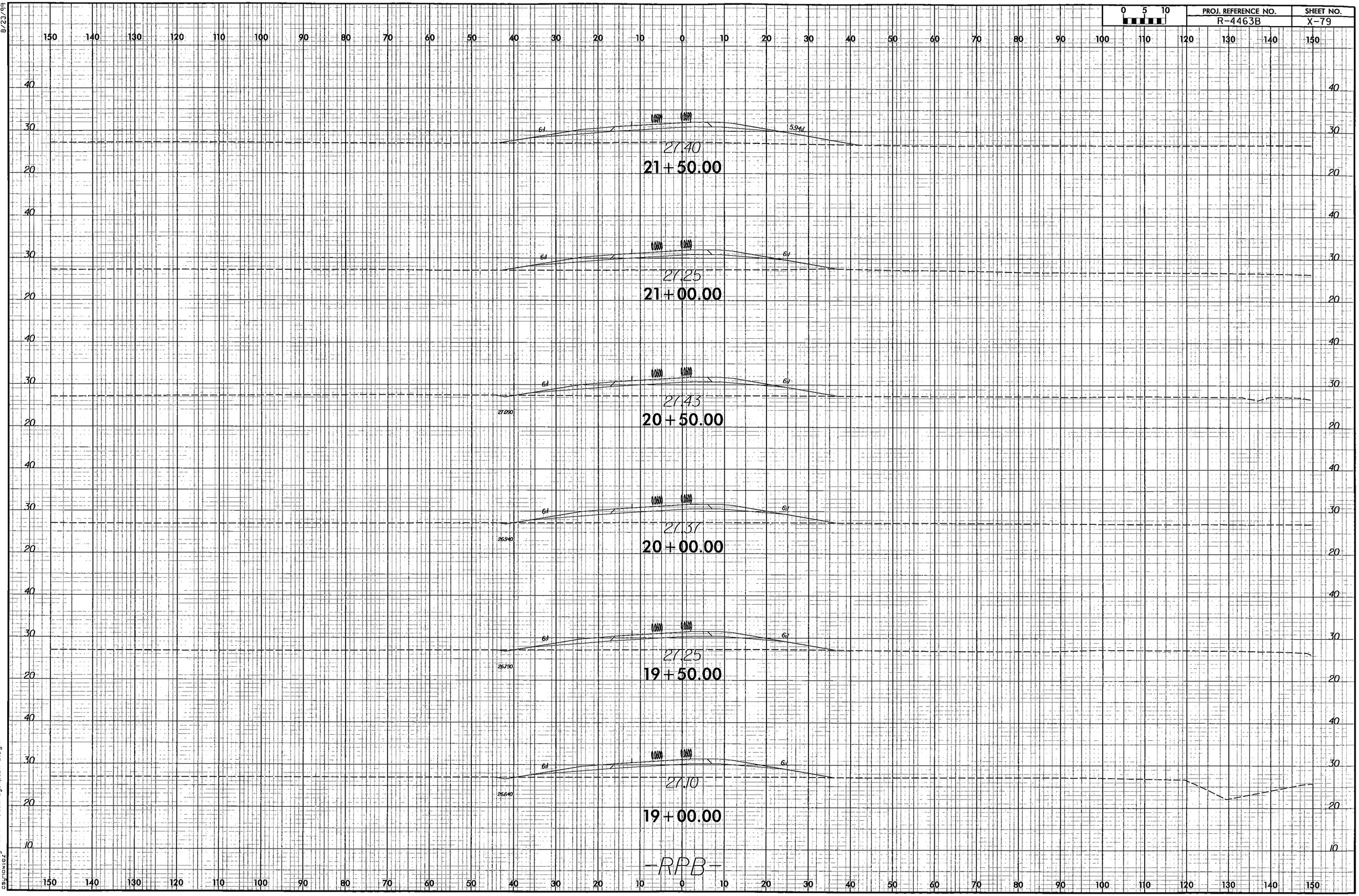
23.11
25.740
16+00.00

-RPB-

D:\2\07 (06/13)
c:\projects\r-4463b_rdy_xs_RPB.dgn

8/23/99

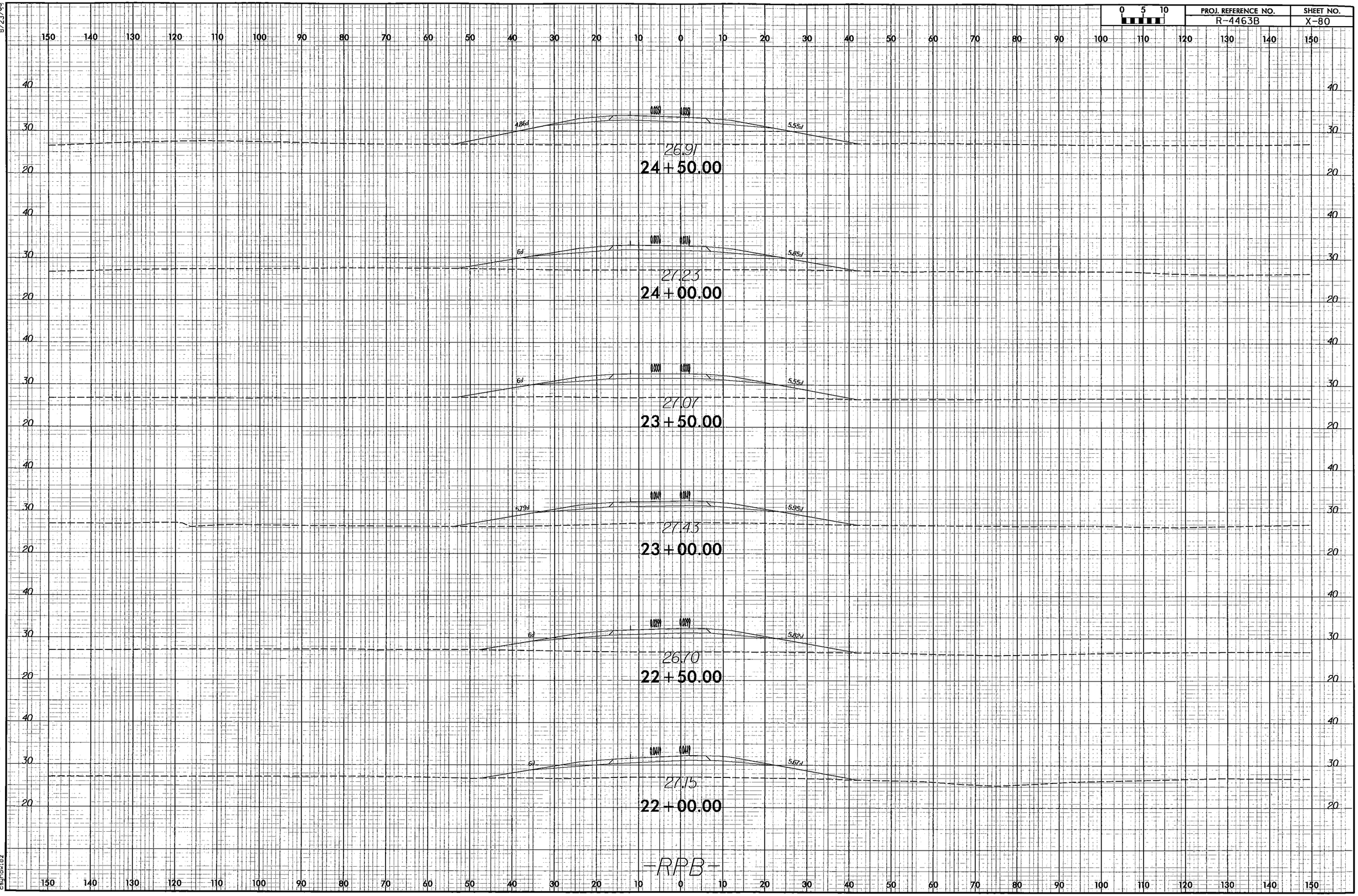
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-79



05\21\07 10:07:38
c:\projects\xsec\r-4463b_rdy_xpl_RPB.dgn
cswanso

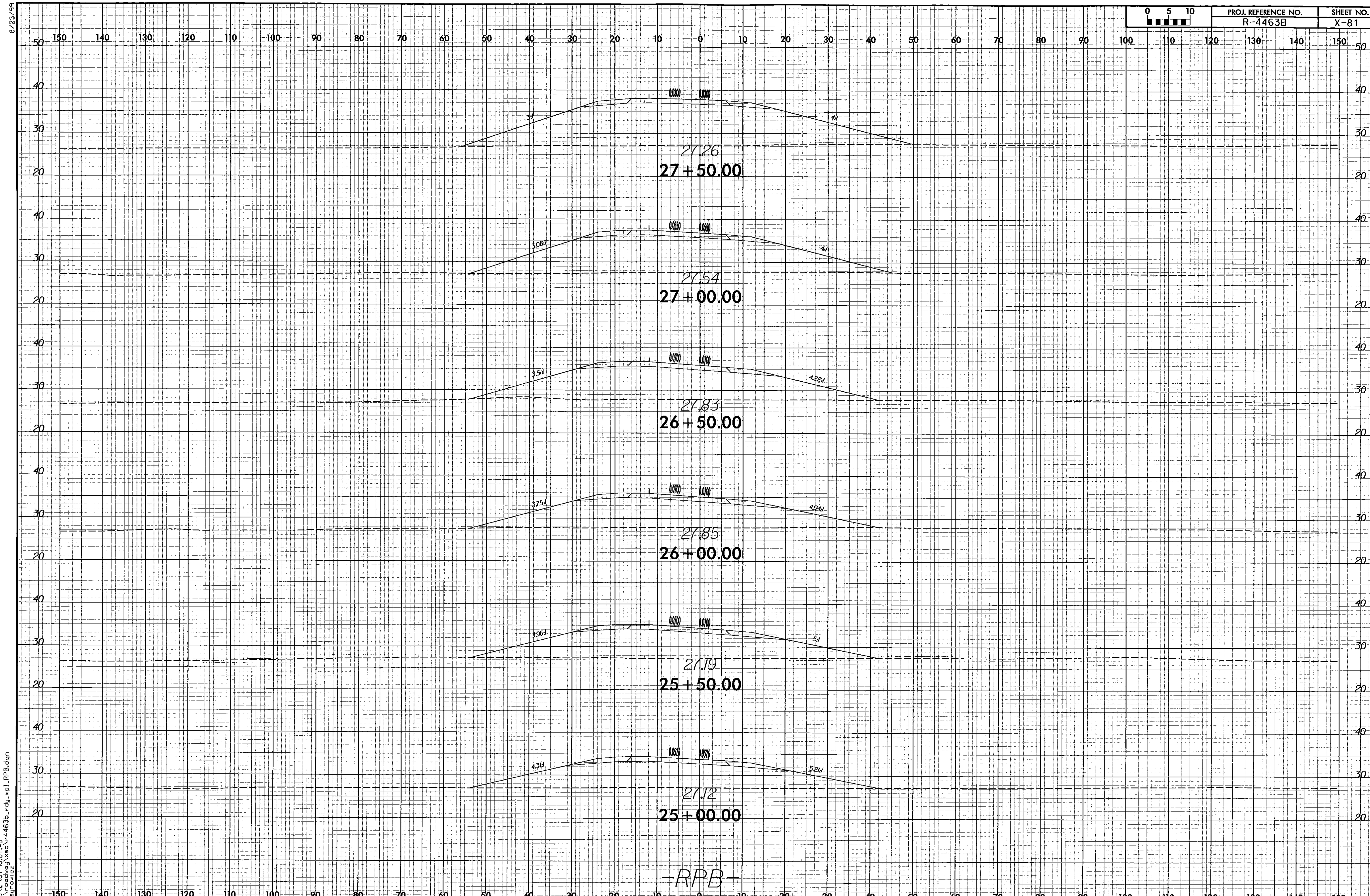
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-80

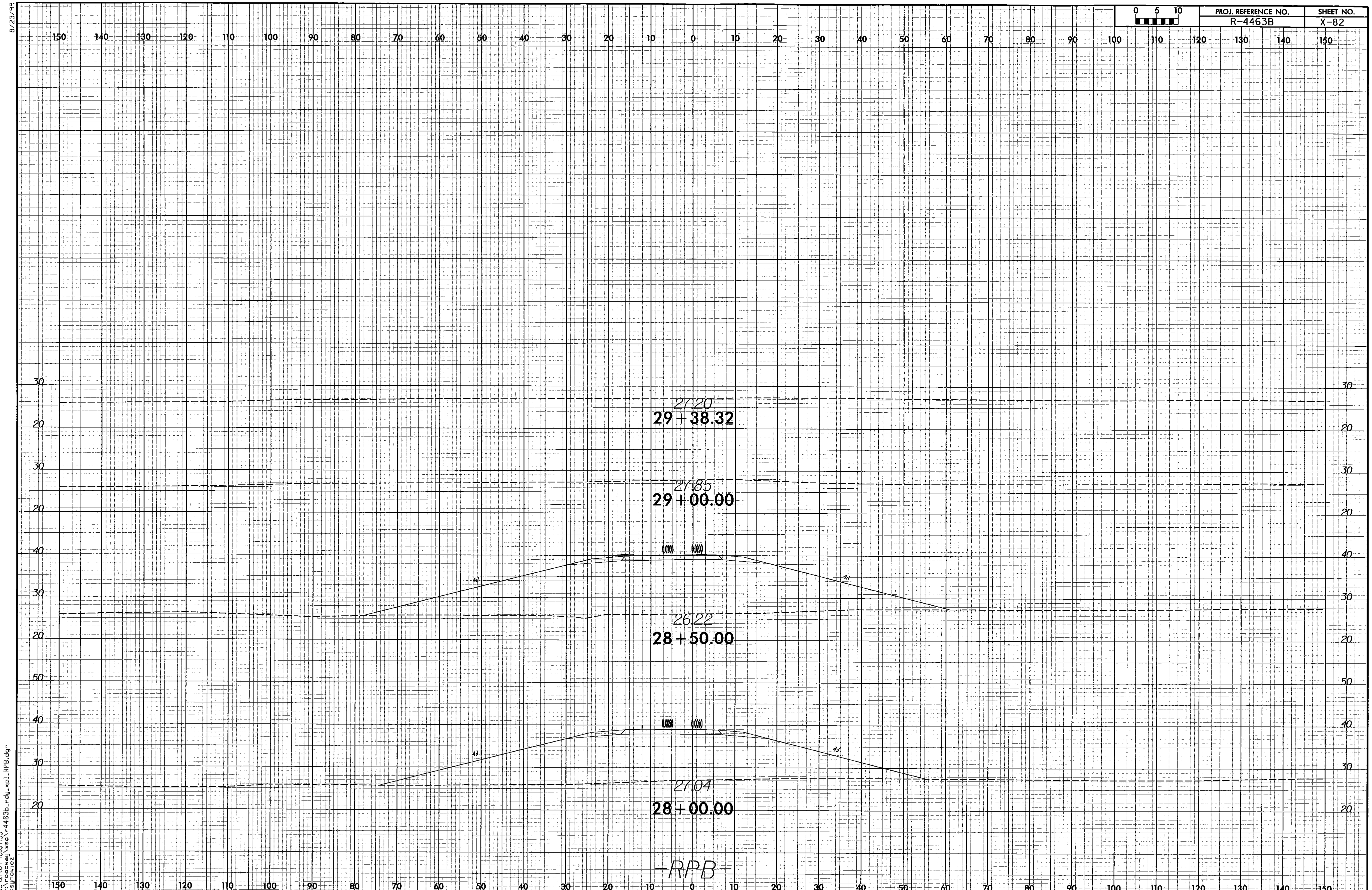


05\2\07 10:07:43
r:\roadway\xsc\r4463b_rdy_xpl_RPB.dgn
cayrowicz

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-81



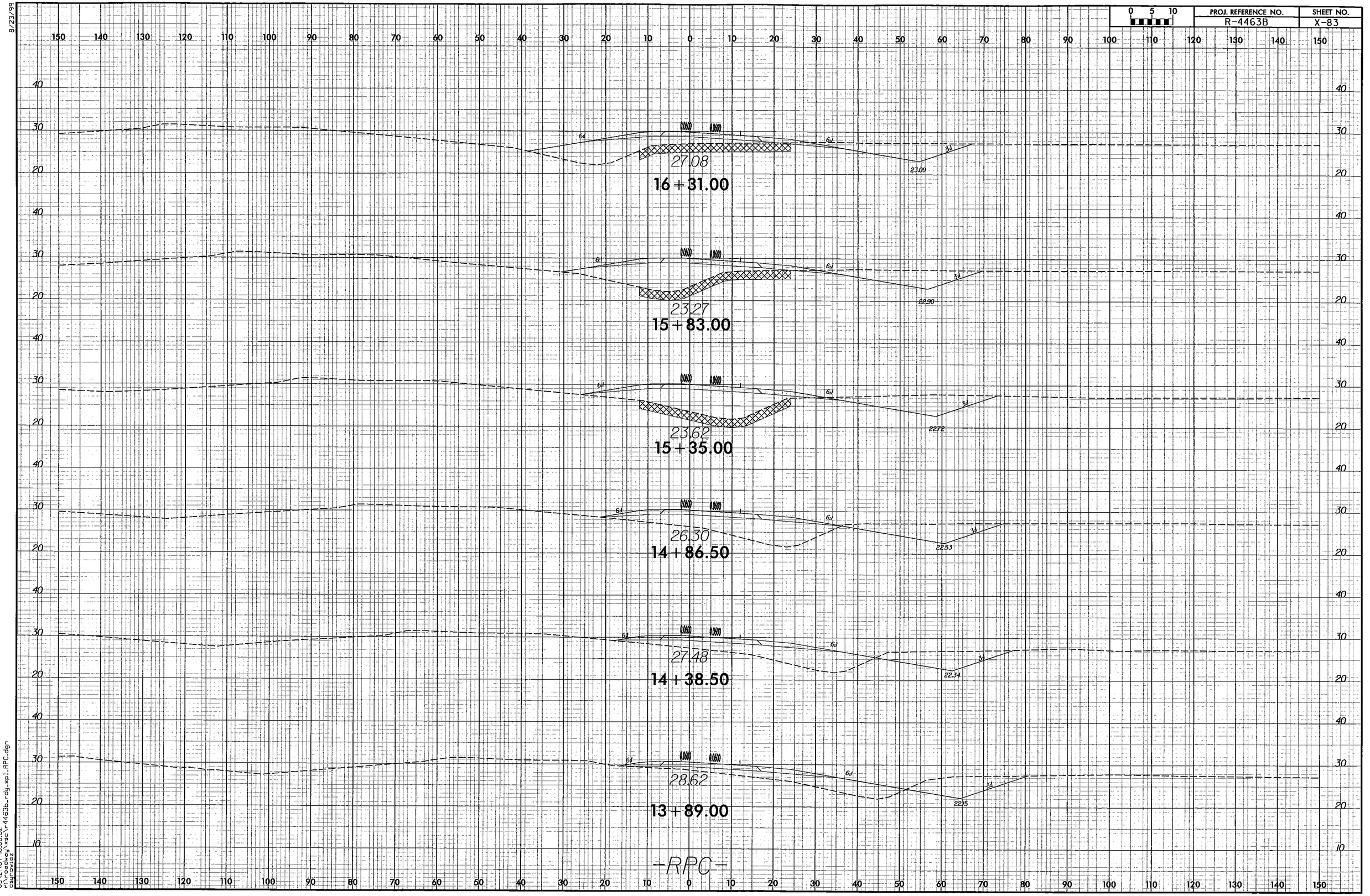
PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-82



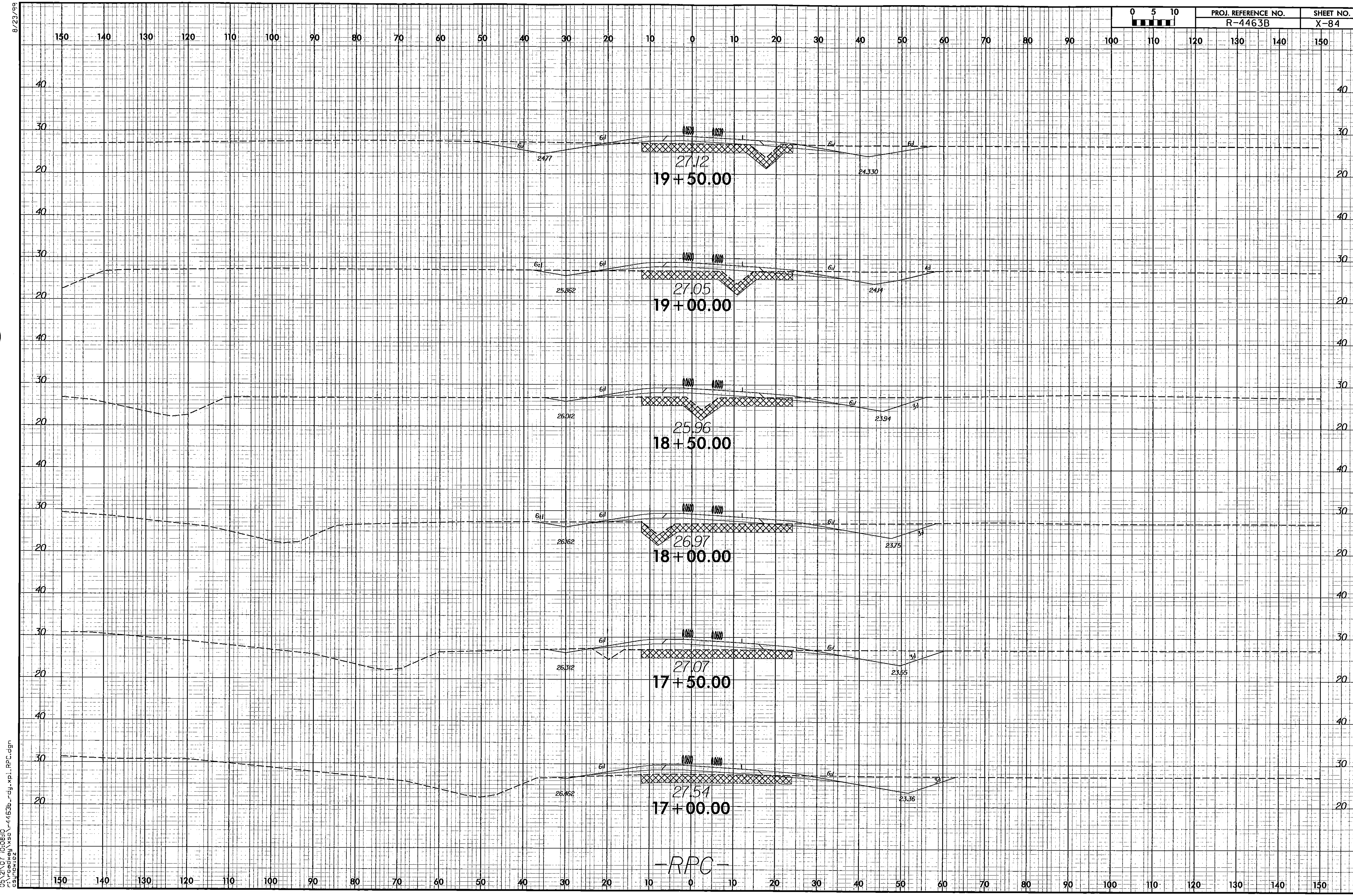
05\21\07 10:07:53
r:\roadway\xsc\r-4463b_rdy_xpl_RPB.dgn
8/23/99

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-83



05\21\07 10:08:02
r:\roadway\xsts\r4463b_rdy_xpl.RPC.dgn
dsymonds



PROJ. REFERENCE NO.
R-4463B
SHEET NO.
X-84
8/23/99
27.12
19+50.00
24.77
24.330
27.05
19+00.00
25.862
24.14
25.96
18+50.00
26.012
23.94
26.97
18+00.00
26.162
23.75
27.07
17+50.00
26.312
23.55
27.54
17+00.00
26.462
23.36
-RPC-
05\21\07 10:08:10
r:\roadway\xsc\r4463b_rdy_xpl_RPC.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-85

27.51

22+50.00

26.134 — 26.172

27.40

22+00.00

25.520 — 25.417

27.11

21+50.00

25.164 — 24.880

27.19

21+00.00

25.066 — 24.56

27.26

20+50.00

24.92 — 24.417

27.30

20+00.00

-RPC-

05\2\107 10:08:19
c:\roadeg\xsec\r4463b_rdy_xpl_RPC.dgn
dgnuser

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-86

SHEAR POINT
-LPC- 17+96.66

0.040 0.040 0.040 0.040

4d

26.83

25+50.00

SHEAR POINT
-LPC- 17+96.00

0.040 0.040 0.040 0.040

3d

27.79

25+00.00

SHEAR POINT
-LPC- 17+49.59

0.040 0.040 0.040 0.040

3d

27.20

24+50.00

SHEAR POINT
-LPC- 17+02.75

6d 0.040 0.040 0.040

4d

26.94

24+00.00

SHEAR POINT
-LPC- 16+95.00

6d 0.040 0.040 0.040

15.41d

26.81

23+50.00

SHEAR POINT
-LPC- 16+70.00

6d 0.034 0.034

6d

27.05

23+00.00

-RPC-

05\21\07 10:08:27
c:\roadway\xsec\r-4463b-rdy-xpl.RPC.dgn
osborne

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-87

26.96
28+31.45

-SHEAR POINT-
-LPC- 20+13.12

-LPCCON- 10+80.35

0.0122 0.0127 0.0130 0.0130 0.0130

27.74
27+50.00

-SHEAR POINT-
-LPC- 19+19.12

-LPCCON- 11+30.25

0.0132 0.0127 0.0148 0.0148 0.0148 0.0148

27.56
27+00.00

-SHEAR POINT-
-LPC- 19+40.12

-LPCCON- 11+80.14

0.0086 0.0081 0.0092 0.0092 0.0092 0.0092

28.12
26+50.00

-SHEAR POINT-
-LPC- 18+94.10

-LPCCON- 12+30.05

0.0130 0.0127 0.0152 0.0152 0.0152 0.0152

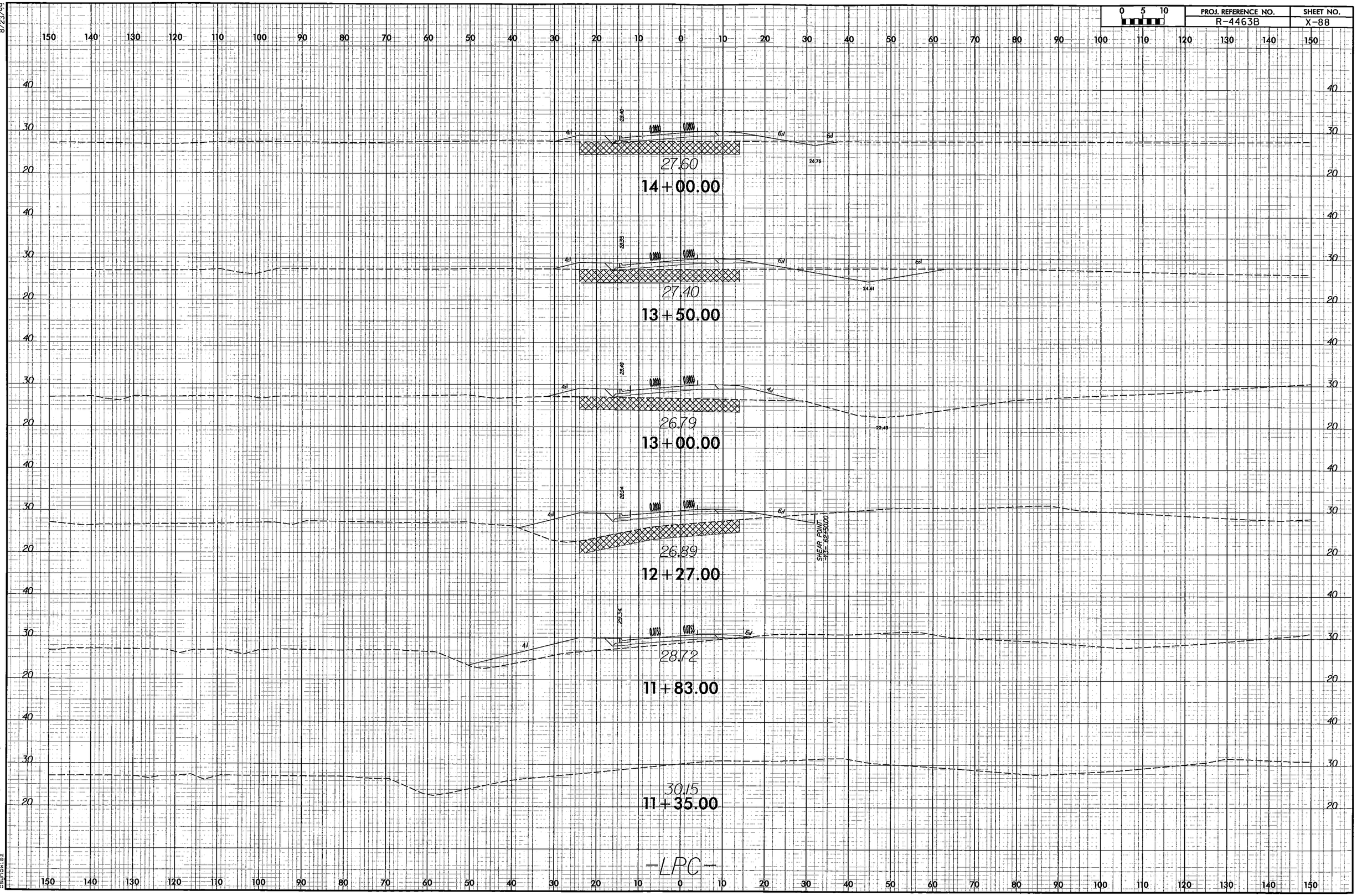
27.46
26+00.00

-RPC-

05\21\07 10:08:33
c:\projects\r-4463b_rdy_xpl_RPC.dgn
csurocega

8/23/99

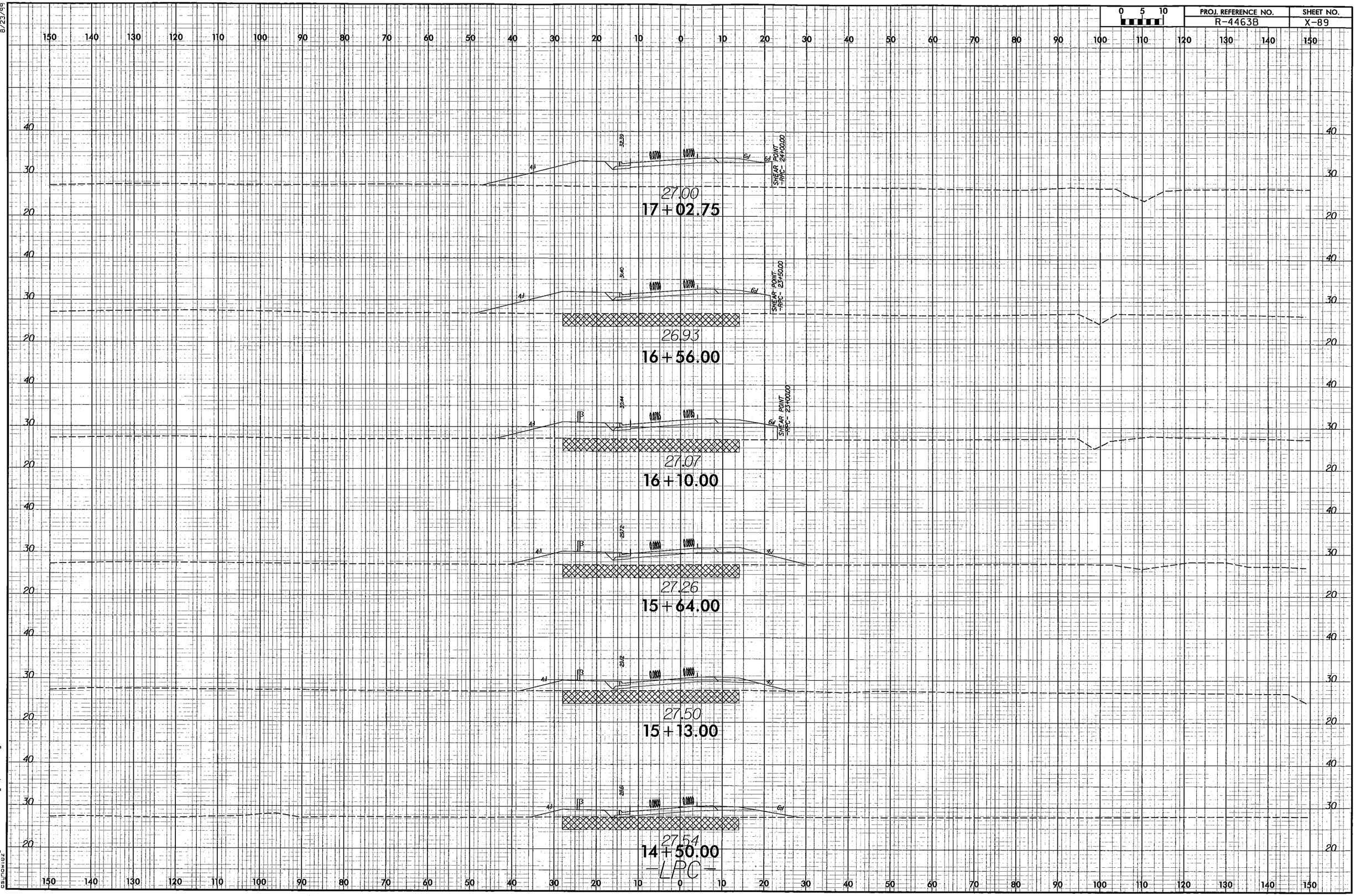
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-88



05\20\07 10:08:43
P:\Roadway\R4463b_rdy_xpl_LPC.dgn
dsymowicz

8/23/99

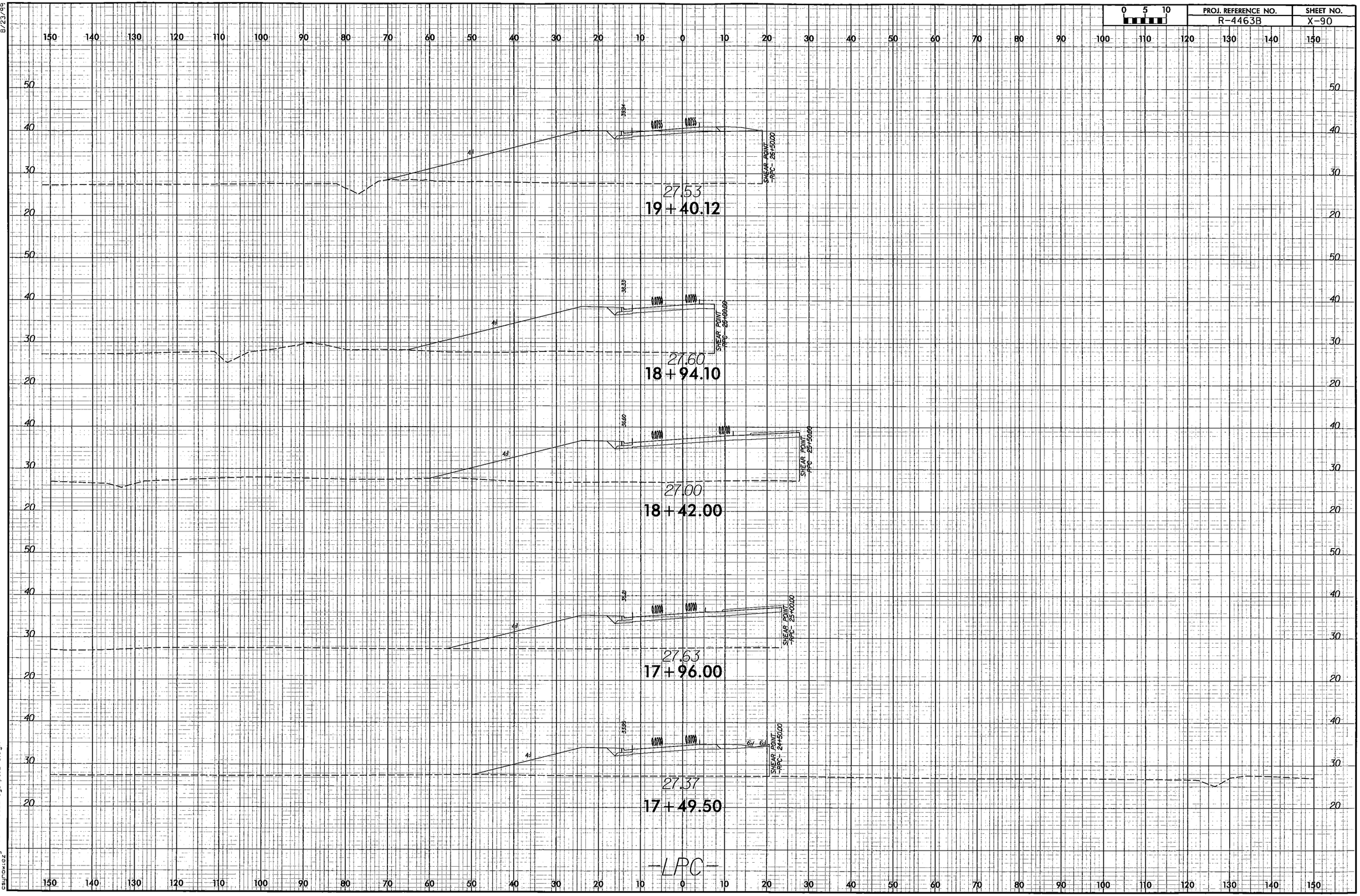
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-89



05/21/07 10:08:52
C:\projects\r4463b\r4463b_rdy_xpl_LPC.dgn

8/23/99

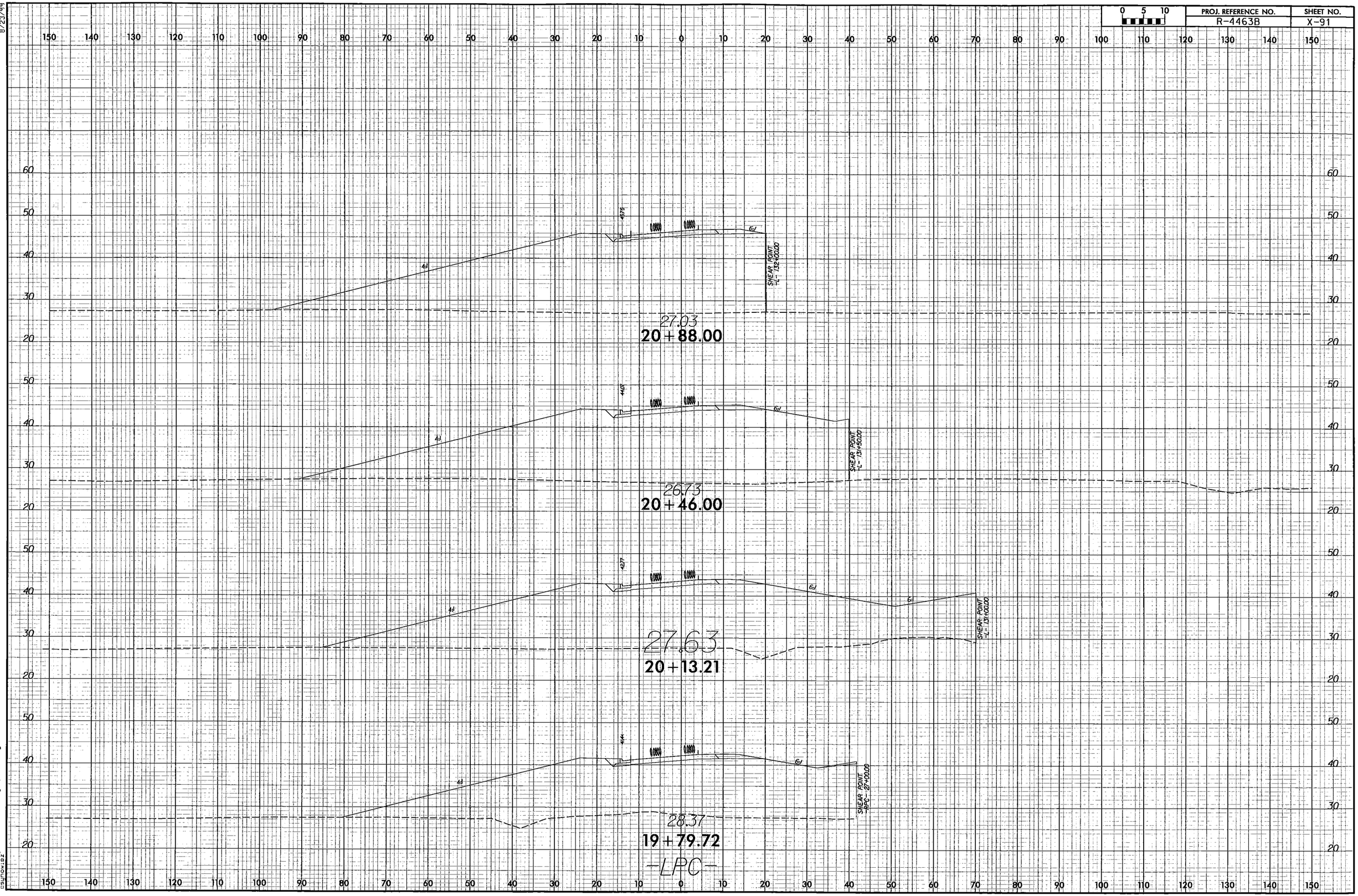
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-90



05\2\07 10:08:59
r:\roadway\xsc\r-4463b_rdy_xpl_LPC.dgn
cgutowicz

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-91



05\21\07 10:09:04
c:\projects\roadway\xsec\r4463b_rdy_xsl_LPC.dgn
csrucker

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-92

27.67

13+00.00

Water Table ▽

Contaminated Soil

26.91

12+50.00

23.81

12+00.00

SHEAR POINT
-L- 227+00.00

20.34

11+50.00

SHEAR POINT
-L- 226+50.00

20.16

11+00.00

-Y8-

05/21/07 10:09:15
c:\projects\wsa\r-4463b_rdy_xpl_Y8.dgn
csumonie2

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-93

27.06
16+00.00

Water Table
Contaminated Soil

27.08
15+50.00

Water Table
Contaminated Soil

27.27
15+00.00

Water Table
Contaminated Soil

27.17
14+50.00

Water Table
Contaminated Soil

27.09
14+00.00

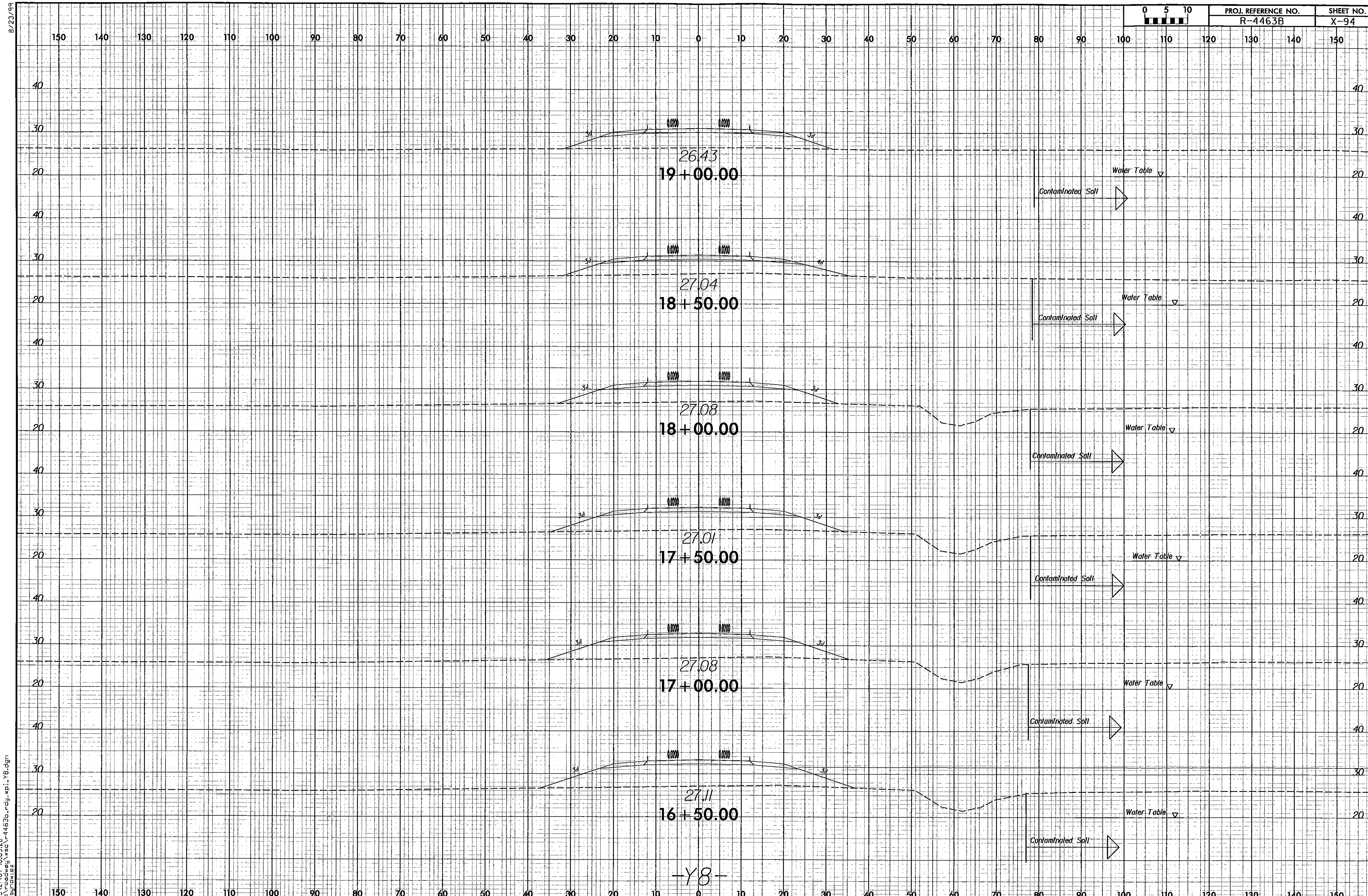
Water Table
Contaminated Soil

28.06
13+50.00

Water Table
Contaminated Soil

-Y8-

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-94



8/23/99

05\21\07 10:09:28
r:\roadway\xsc\r4463b_rdy_xpl_Y8.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-95

25.64
22+00.00

Water Table
Contaminated Soil

25.68
21+50.00

Water Table
Contaminated Soil

25.55
21+00.00

Water Table
Contaminated Soil

25.41
20+50.00

Water Table
Contaminated Soil

25.64
20+00.00

Water Table
Contaminated Soil

25.96
19+50.00

Water Table
Contaminated Soil

-Y8-

05\21\07 10:09:34
c:\projects\xsc\r4463b_rdy_xsi_Y8.dgn
dsmith02

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-96

25.40

25+00.00

Water Table
Contaminated Soil

26.52

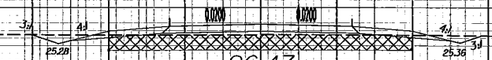
24+50.00

Water Table
Contaminated Soil

26.51

24+00.00

Water Table
Contaminated Soil



26.43

23+50.00

Water Table
Contaminated Soil

26.14

23+00.00

Water Table
Contaminated Soil

25.79

22+50.00

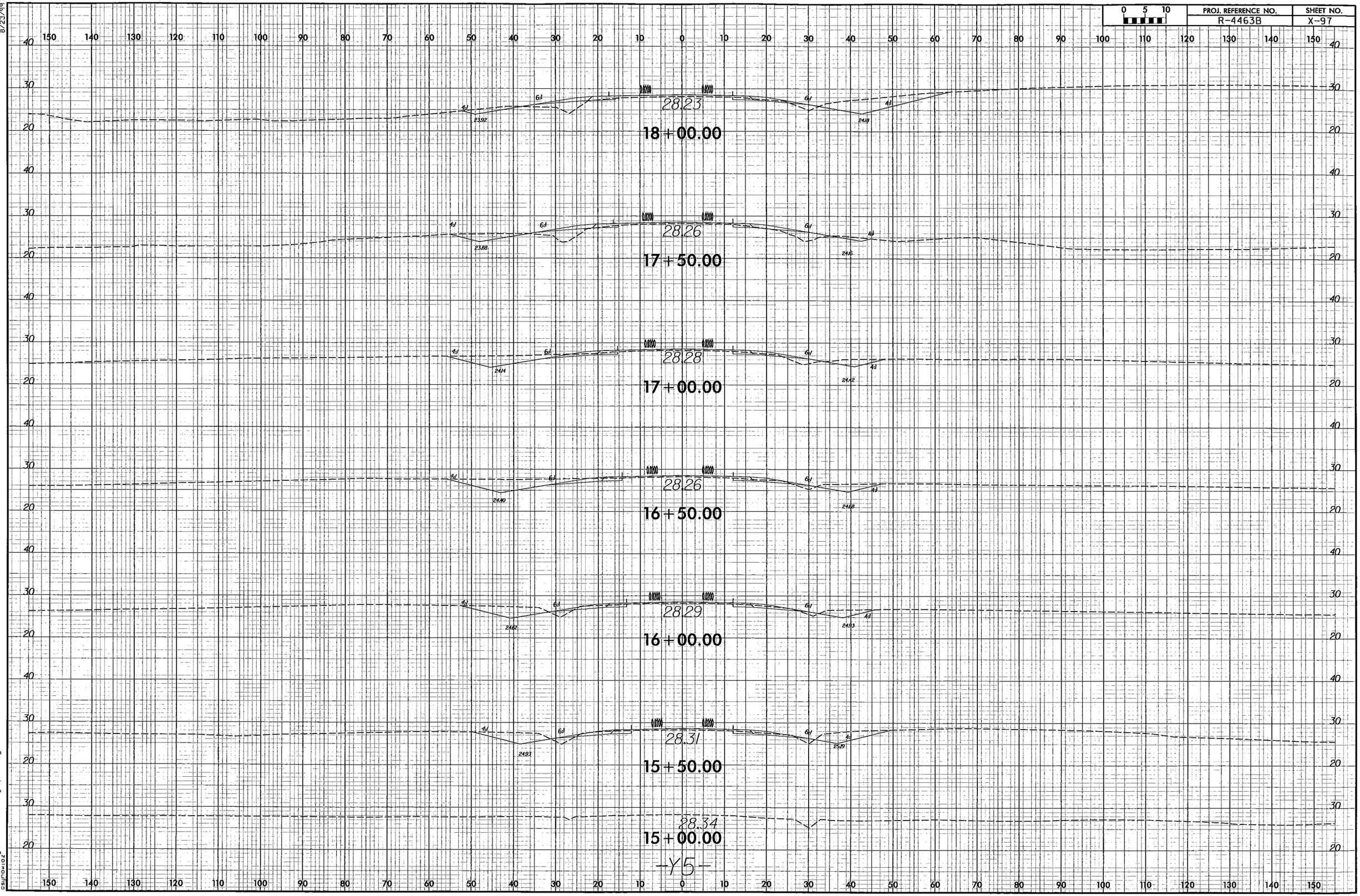
Water Table
Contaminated Soil

-Y8-

05\21\07 10:09:42
c:\projdwg\xsc\r-4463b_rdy_xpl_Y8.dgn
cshankle

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-97



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pgibbons2

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-98

28.37

21+00.00

28.36

20+50.00

28.33

20+00.00

28.32

19+50.00

28.27

19+00.00

28.23

18+50.00

-Y5-

05\21\07 10:10:00
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chamowitz

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-99

28.27
24+00.00

Contaminated Soil
Water Table

28.29
23+50.00

28.35
23+00.00

28.37
22+50.00

28.35
22+00.00

28.36
21+50.00

-Y5-

05-21-07 10:00:06
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csymonds

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
R-4463B	X-100

0 5 10

28.21
28+00.00

28.28
27+50.00

28.33
27+00.00

28.32
26+50.00

28.29
26+00.00

28.29
25+50.00

28.35
25+00.00

28.36
24+50.00

Contaminated Soil
Water Table

-Y5-

05\21\07 10:10:11
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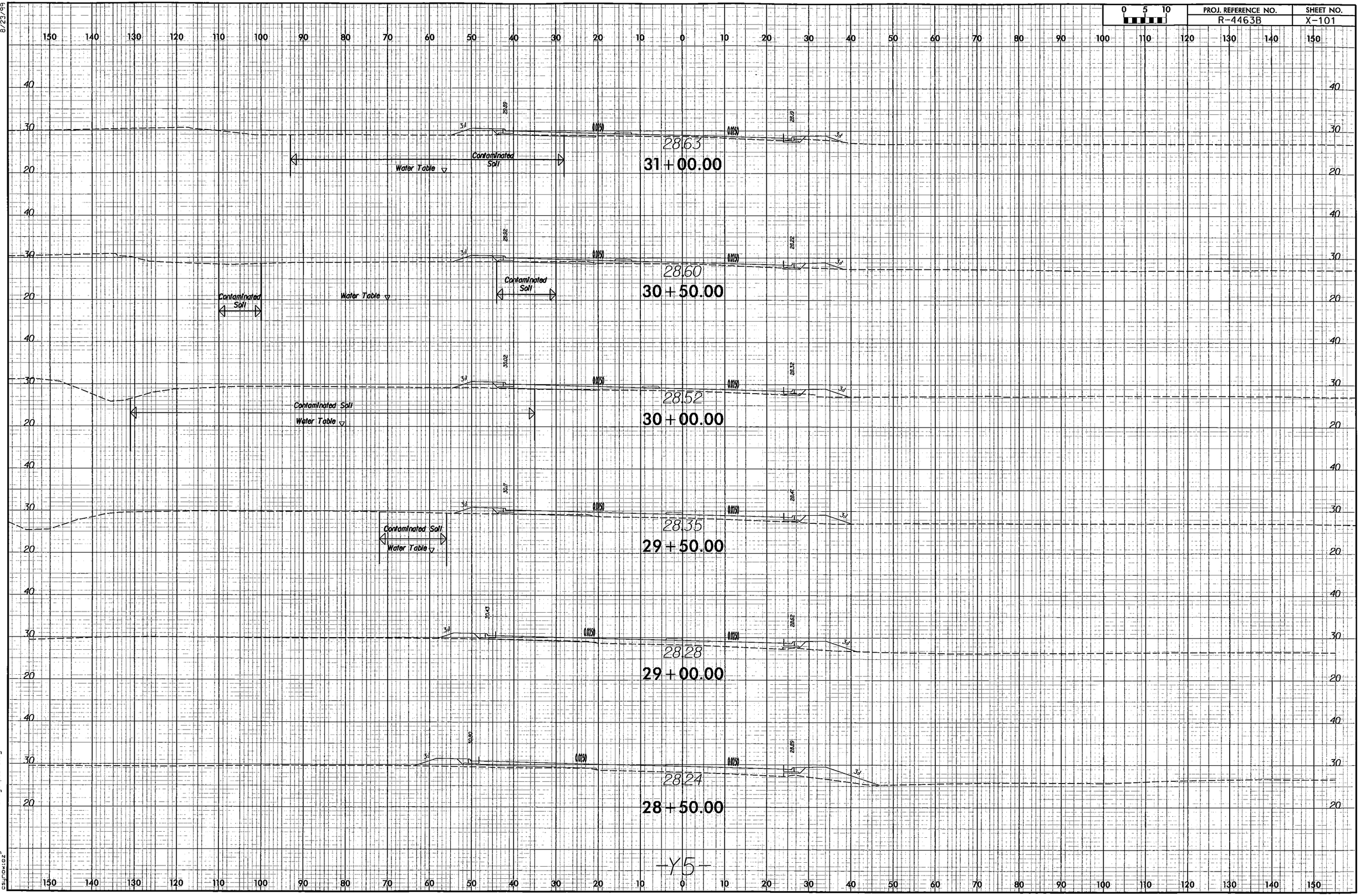
civilcadd

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-101



8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-102

29.16
34+00.00

28.91
33+50.00

28.69
33+00.00

28.55
32+50.00

28.73
32+00.00

28.63
31+50.00

-Y5-

05\21\07 10:10:24
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cjmonroe

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-103

28.53
37+00.00

29.00
36+50.00

29.51
36+00.00

29.25
35+50.00

29.26
35+00.00

29.25
34+50.00

-Y5-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-104

28.63
40+00.00

28.67
39+50.00

28.67
39+00.00

28.55
38+50.00

28.48
38+00.00

28.46
37+50.00

-Y5-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-105

28.95
43+00.00

28.91
42+50.00

28.88
42+00.00

28.84
41+50.00

28.79
41+00.00

28.69
40+50.00

-Y5-

05\21\07 10:10:43
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cswood

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-106

29.04
44+50.00

28.98
44+00.00

28.91
43+50.00

-Y5-

05\21\07 10:0:48
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csajowicz

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	X-107

30.50
13+50.00

30.48
13+00.00

30.34
12+50.00

30.19
12+00.00

30.03
11+50.00

30.09
11+00.00

28.58
10+50.00

28.72
10+00.00

-Y6-

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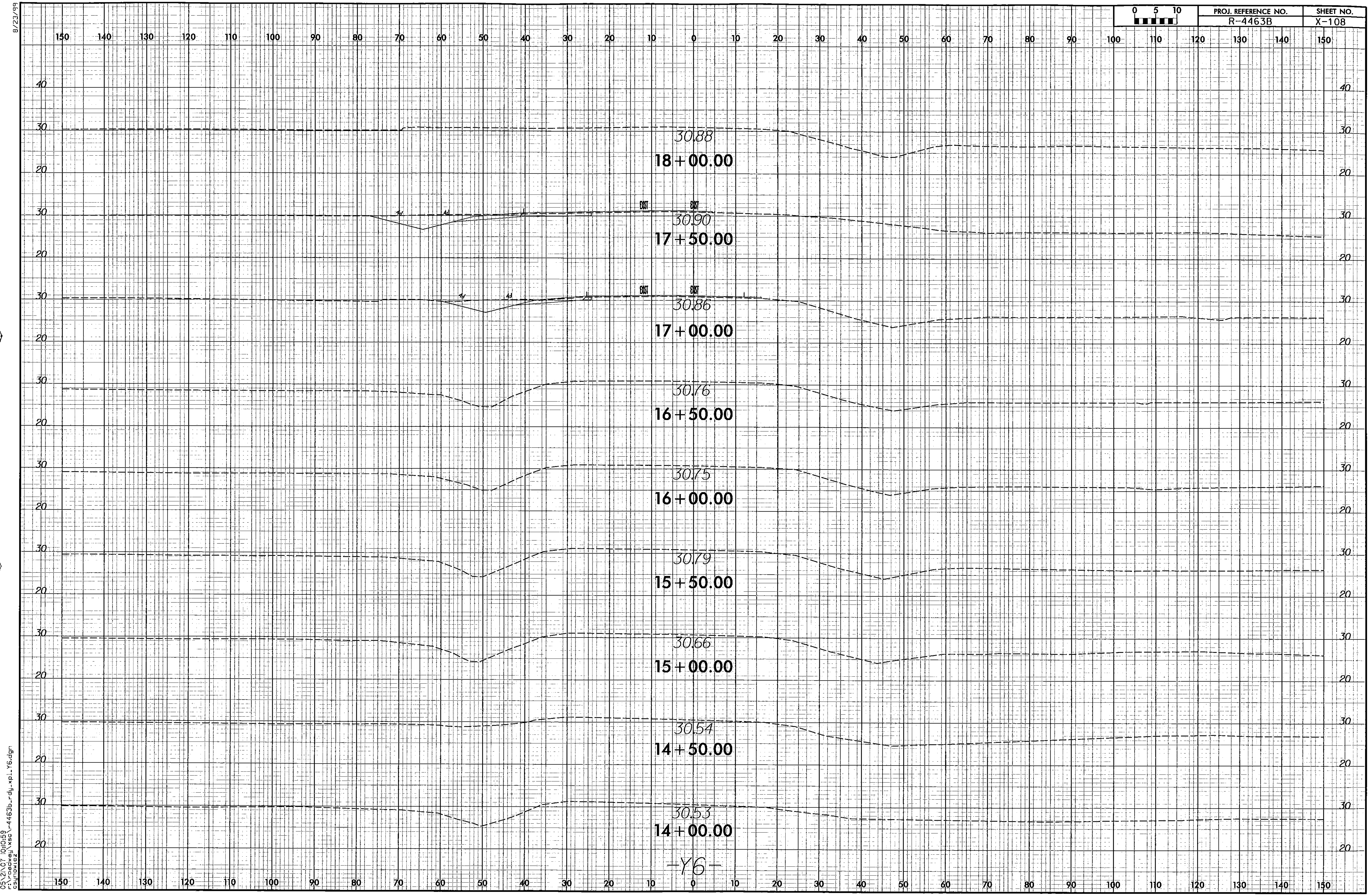
sumrowe2


PROJ. REFERENCE NO.
R-4463B
SHEET NO.
X-108
0 5 10
30.88
18+00.00
EXIST
30.90
17+50.00
EXIST
30.86
17+00.00
30.76
16+50.00
30.75
16+00.00
30.79
15+50.00
30.66
15+00.00
30.54
14+50.00
30.53
14+00.00
-Y6-
8/23/99
05\21\07 10:00:59
r:\roadway\xsc\r4463b_rdy_xpl_Y6.dgn
csyrowiez

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	109

28.99

13+00.00

28.81

12+50.00

22.68

12+00.00

26.40

11+50.00

26.39

11+00.00

23.08

10+50.00

29.23

10+00.00

-DRI-

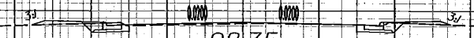
05\22\07 10:33:21
c:\projects\dgn\xsg\r4463b_rdy_xpl.dr1.dgn
csumner

8/23/99

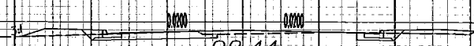
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-4463B	110

27.58
14+00.00

28.05
13+50.00



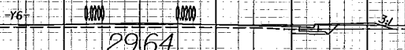
28.35
13+00.00



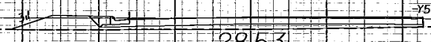
28.44
12+50.00

28.66
12+00.00

25.58
11+50.00



29.64
11+00.00



28.53
10+50.00

28.72
10+00.00

-DR2-

D5\2\07 10:11:2
c:\roadway\xsc\r4463b_rdy_xpl_dr2.dgn
cshroadway