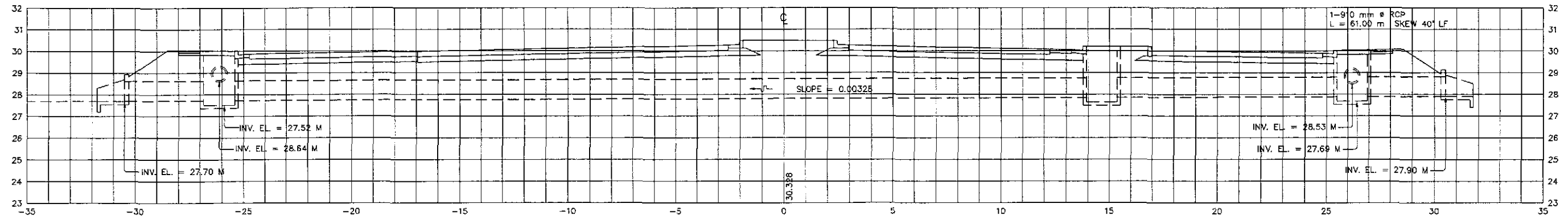
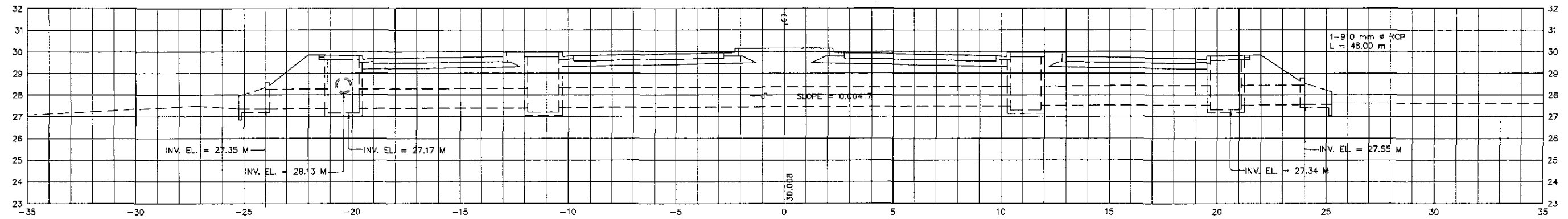


 JAPAN INTERNATIONAL COOPERATION AGENCY	DESIGNED	DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :				SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/09/02	<i>[Signature]</i>		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)				1:100	DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 110+064 - STA. 110+590	DC-01
	SUBMITTED	10/19/02	<i>[Signature]</i>		CABANATUAN BYPASS - CONTRACT PACKAGE II				FULL SIZE A1		
	BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO, Project Director Reviewed By: JOSEFINA M. ALAGAR, Chief, Highways Division Recommended By: GILBERTO S. REYES, OIC, Director IV Recommended By: MANUEL M. BONOAN, Undersecretary Approved By: SIMEON A. DATUMANONG, Secretary										

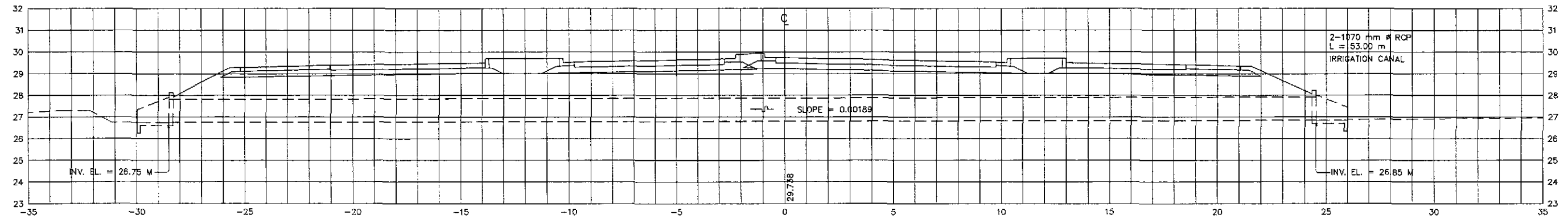
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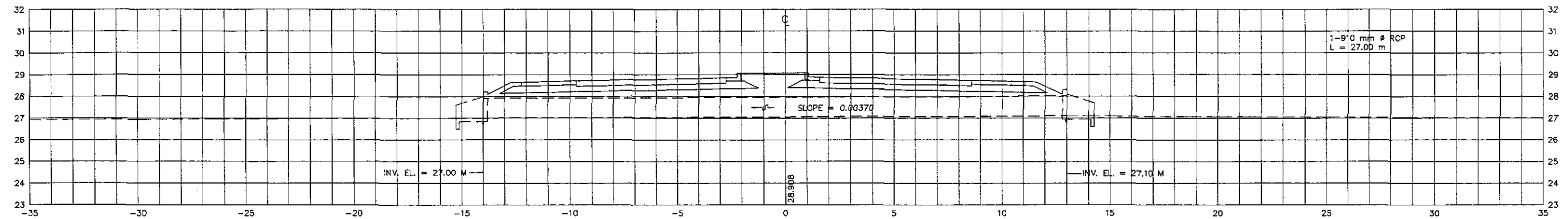
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111+086

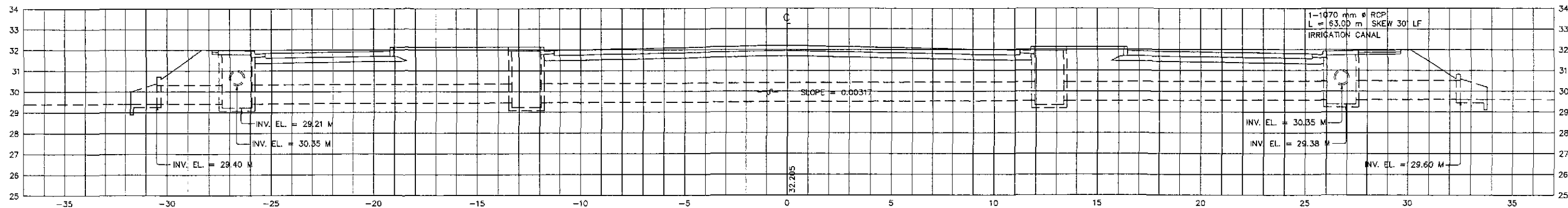


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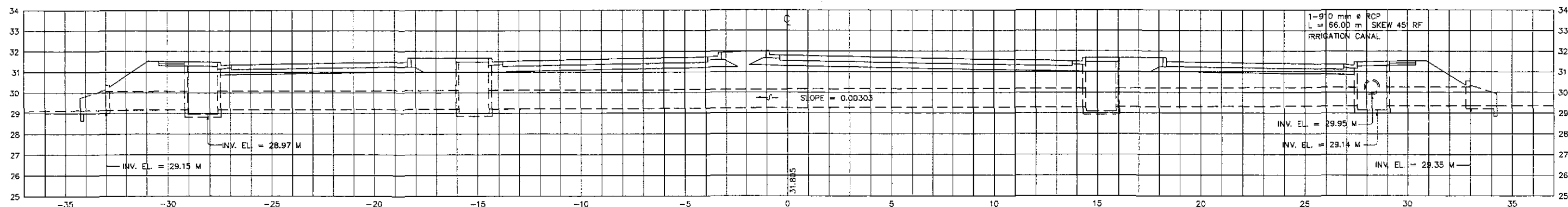


<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>		<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>		<p>PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p>		<p>SCALE : 1:100 FULL SIZE A1</p>		<p>SHEET CONTENTS : DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 110+920 - STA. 111+204</p>		<p>SHEET NO. : DC-02</p>	
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CHECKED	10/16/02	SIGNATURE	[Signature]	CHECKED	10/16/02	SIGNATURE	[Signature]	CHECKED	10/16/02	SIGNATURE	[Signature]
SUBMITTED	10/18/02	SIGNATURE	[Signature]	SUBMITTED	10/18/02	SIGNATURE	[Signature]	SUBMITTED	10/18/02	SIGNATURE	[Signature]
<p>YACHIRO ENGINEERING CO., LTD.</p>		<p>DANILLO C. TRAJANO Project Director</p>		<p>JOSEFINA M. ALAGAR Chief, Highways Division</p>		<p>GILBERTO S. REYES OIC, Director IV</p>		<p>MANUEL M. BONDAN Undersecretary</p>		<p>SIMEON A. DATUMANONG Secretary</p>	
<p>CABANATUAN BYPASS - CONTRACT PACKAGE II</p>											

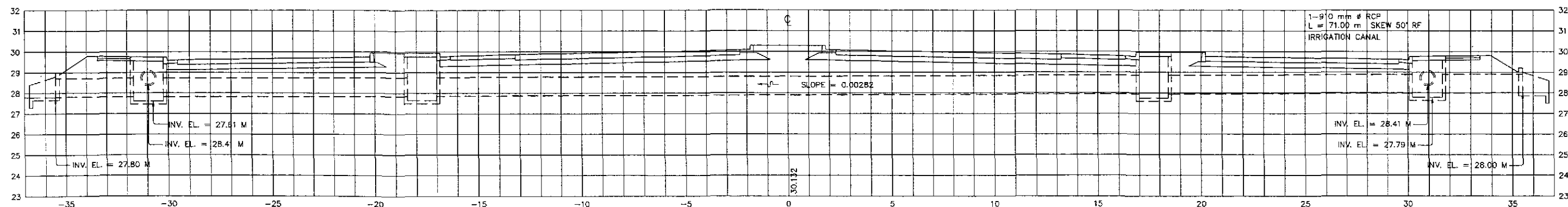
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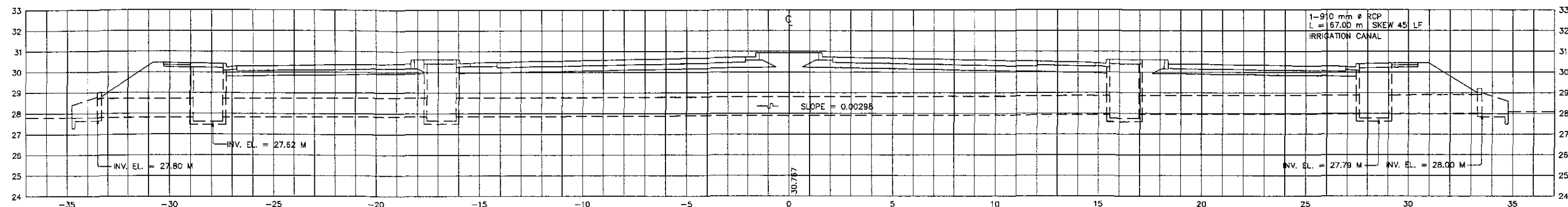
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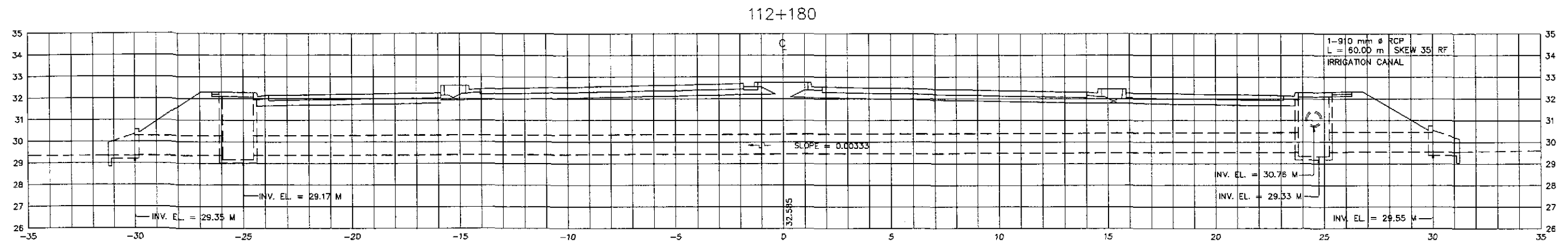
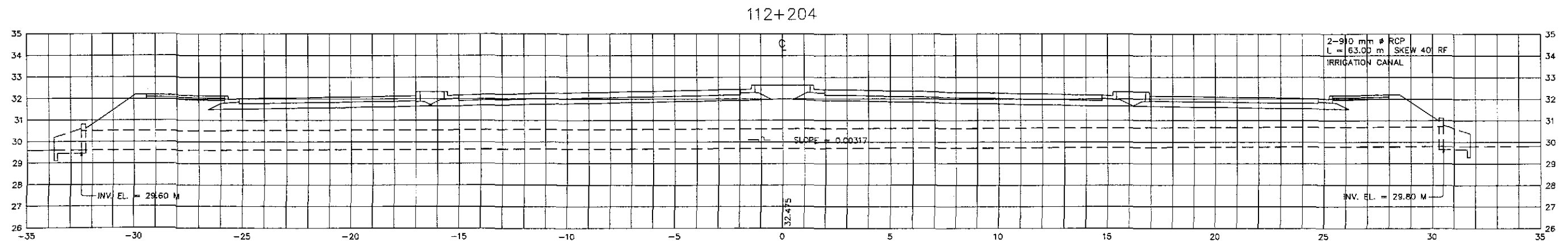
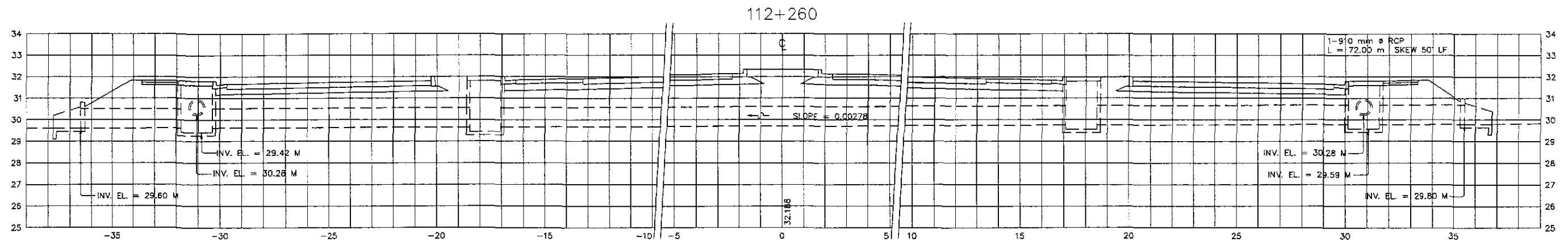
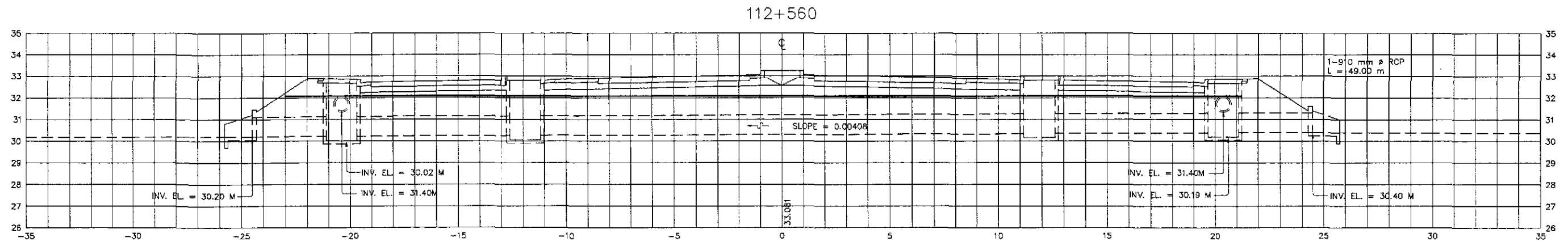
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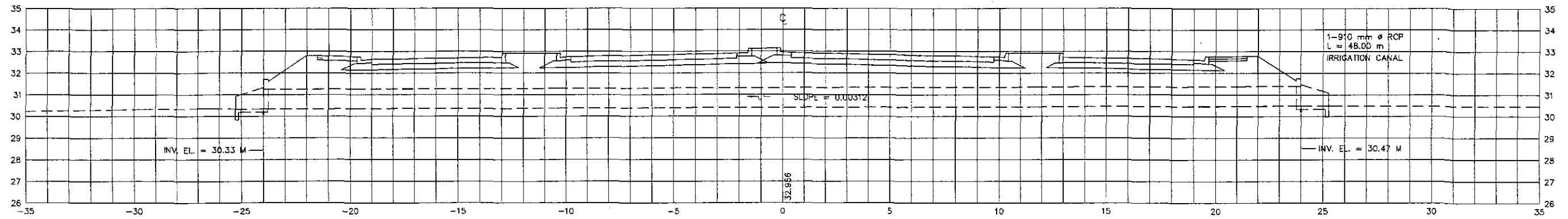


<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>		<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>		<p>PROJECT AND LOCATION :</p> <p>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p>		<p>SCALE :</p> <p>1:100</p>	<p>SHEET CONTENTS :</p> <p>DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 111+304 - STA. 111+980</p>	<p>SHEET NO. :</p> <p>DC-03</p>
<p>DESIGNED</p> <p>10/10/02</p> <p>10/10/02</p>	<p>SIGNATURE</p> <p><i>[Signature]</i></p> <p>10/10/02</p> <p>10/10/02</p>	<p>Submitted By:</p> <p>DANILO C. TRAJANO</p> <p>Project Director</p>	<p>Reviewed By:</p> <p>JOSEFINA M. ALAGAR</p> <p>Chief, Highways Division</p>	<p>Recommended By:</p> <p>GILBERTO S. REYES</p> <p>OC, Director IV</p>	<p>Recommended By:</p> <p>MANUEL M. BONGAN</p> <p>Undersecretary</p>	<p>Approved By:</p> <p>SIMEON A. DATUMANONG</p> <p>Secretary</p>	<p>CABANATUAN BYPASS - CONTRACT PACKAGE II</p>	

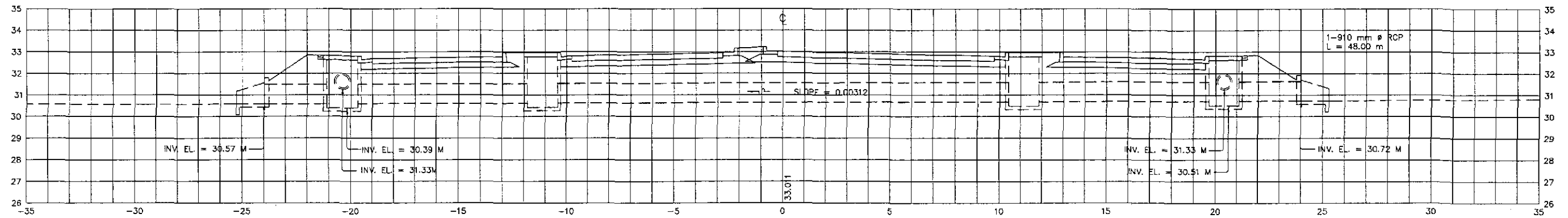


<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>KATAHIRA & ENGINEERS YEO YACHIYO ENGINEERING CO., LTD.</p>	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :				SCALE :	SHEET CONTENTS :	SHEET NO. :	
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	CHECKED	10/16/07		[Signature]	CABANATUAN BYPASS - CONTRACT PACKAGE II				FULL SIZE A1		
	SUBMITTED	10/19/07		[Signature]							
	Submitted By:	DANILO C. TRAJANO Project Director	Reviewed By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES OIC, Director IV	Approved By:	MANUEL M. BONGAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary	

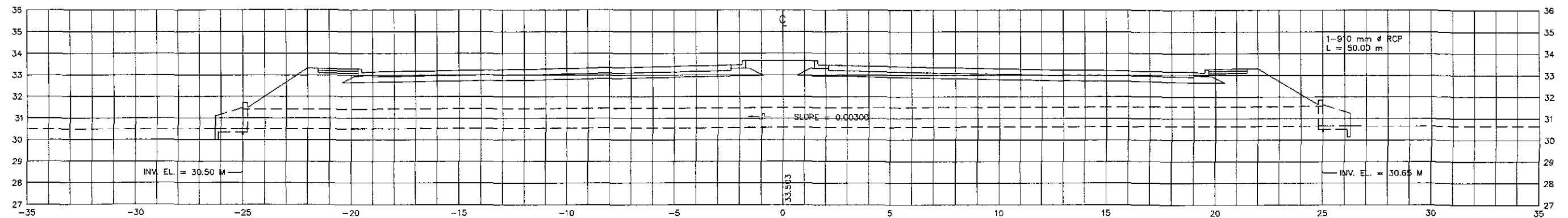
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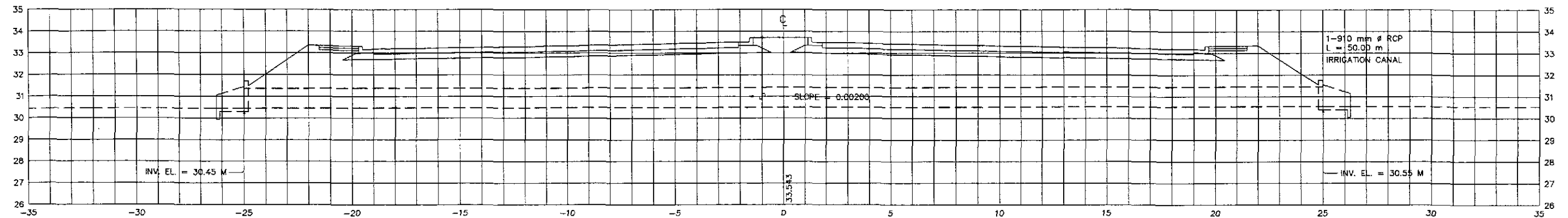
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112+750

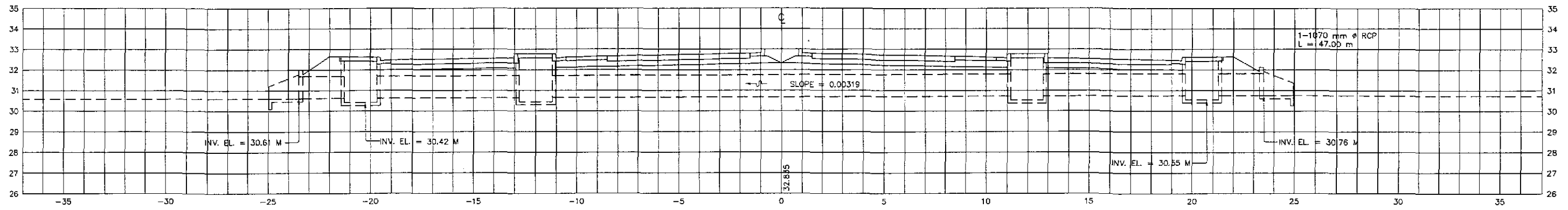


112+735

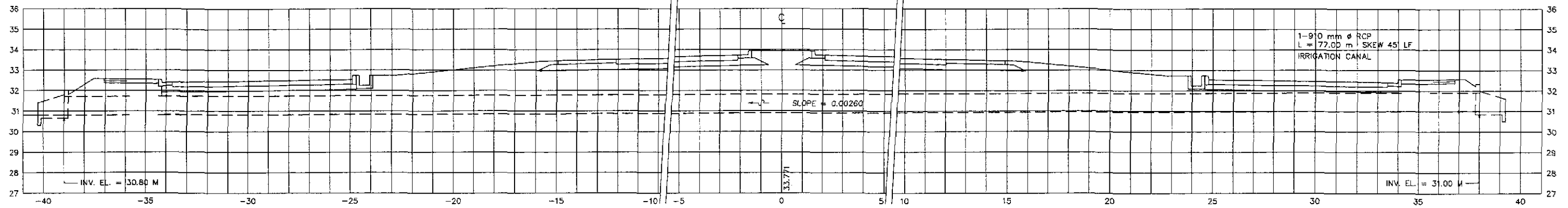


 JAPAN INTERNATIONAL COOPERATION AGENCY		 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE II		SCALE : 1:100 FULL SIZE A1	SHEET CONTENTS : DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 112+735 - STA. 112+865	SHEET NO. : DC-05
DESIGNED	DATE: 10/09/02 SIGNATURE: [Signature]	PHIL - PWO	BUREAU OF DESIGN	OFFICE OF THE SECRETARY	APPROVED BY: [Signature]			
CHECKED	10/16/02 [Signature]	Submitted By:	Reviewed By:	Recommended By:	(See cover sheet for Signature/Approval)			
SUBMITTED	10/18/02 [Signature]	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary			

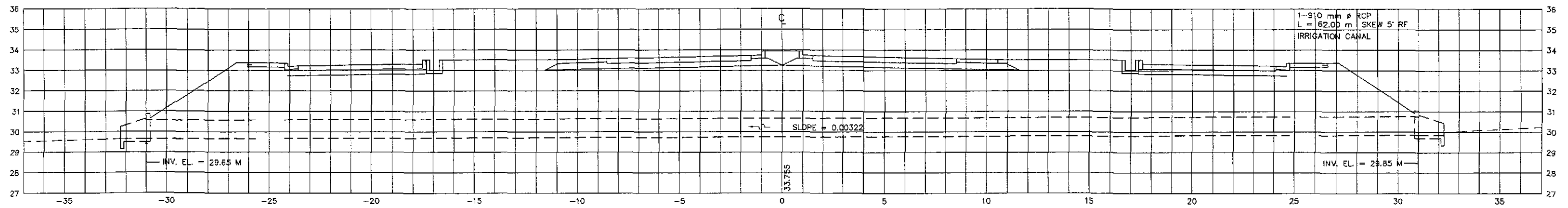
113+660



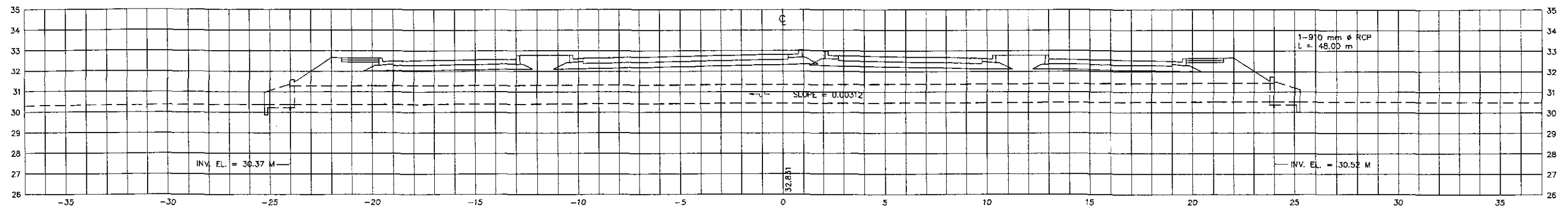
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113+300

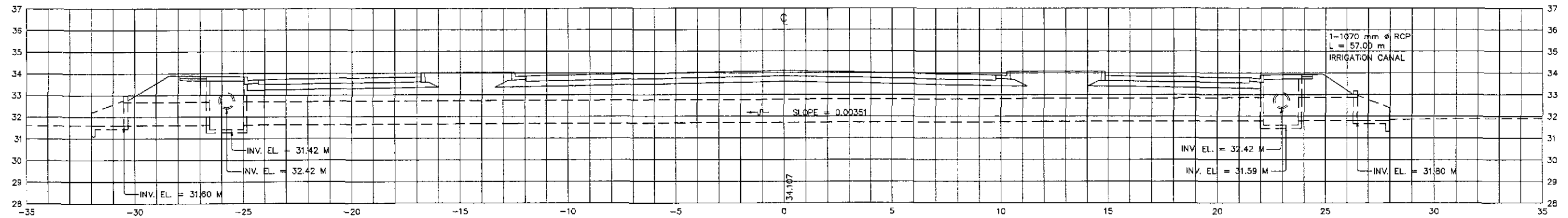


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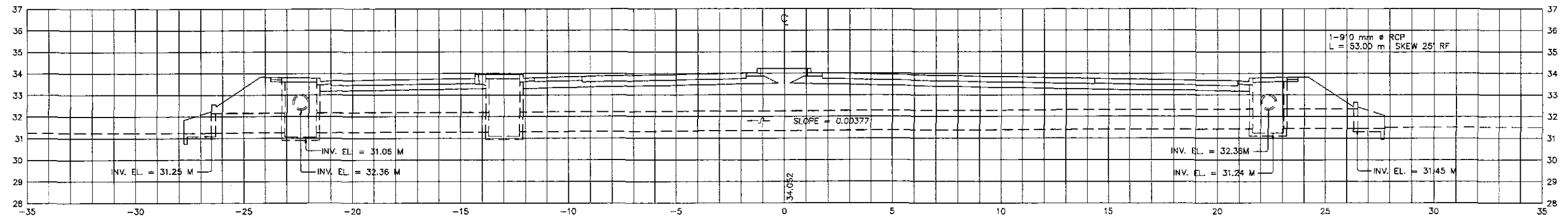


 JAPAN INTERNATIONAL COOPERATION AGENCY		 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		SCALE : 1:100 FULL SIZE A1	SHEET CONTENTS : DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 112+890 - STA. 113+660	SHEET NO. : DC-06
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CHECKED	10/14/02	H. K. AKIM	Submitted By:	Reviewed By:	Recommended By:			
SUBMITTED	10/18/02	M. K. KIM	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAN Undersecretary	SIMEDON A. DATUMANONG Secretary	

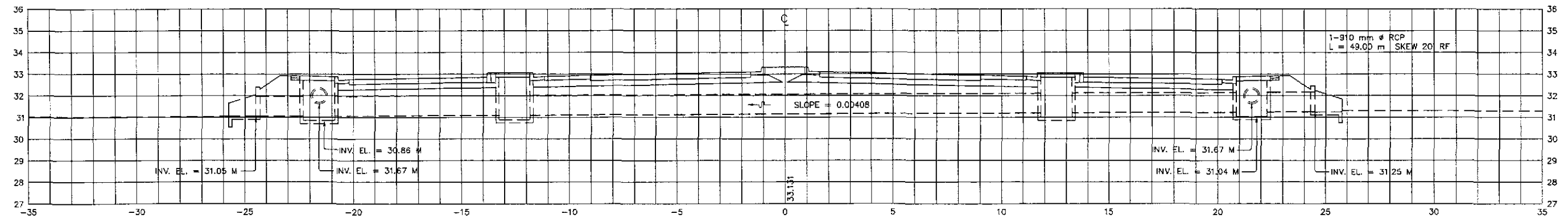
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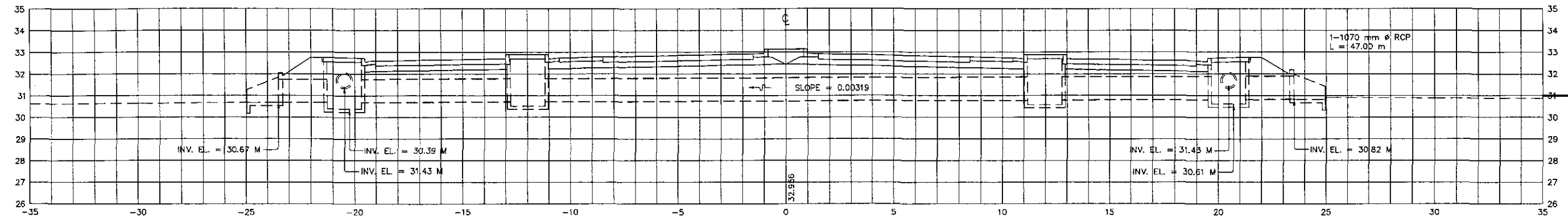
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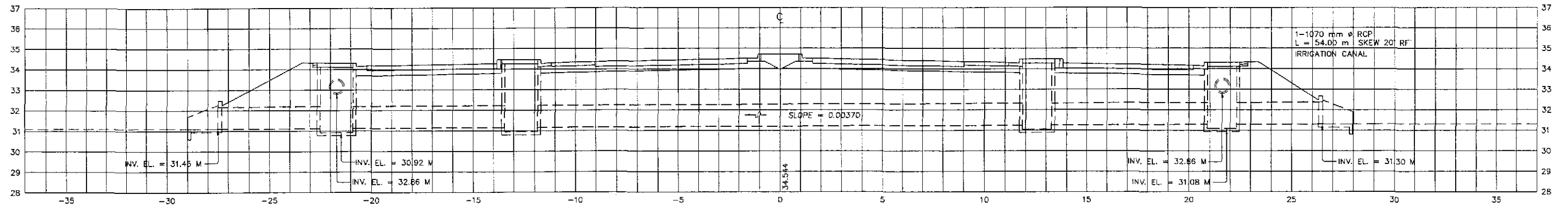


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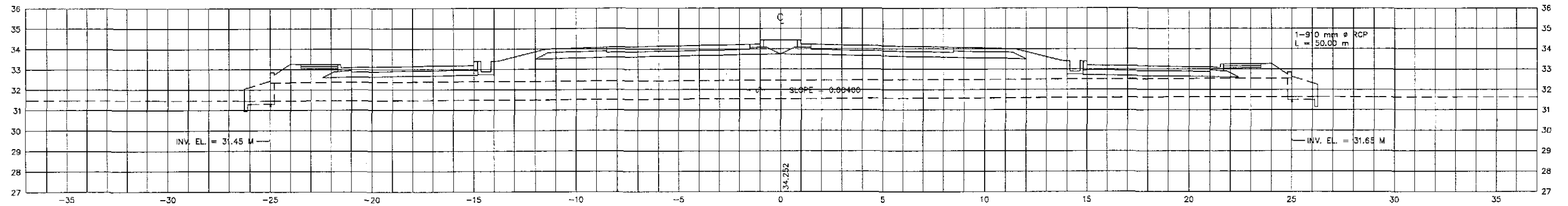


<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>		<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>		<p>PROJECT AND LOCATION :</p> <p>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p>		<p>SCALE :</p> <p>1:100</p>	<p>SHEET CONTENTS :</p> <p>DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 113+880 - STA. 114+609</p>	<p>SHEET NO. :</p> <p>DC-07</p>
<p>DESIGNED</p> <p>10/09/02</p> <p>10/16/02</p> <p>10/18/02</p>	<p>SIGNATURE</p> <p><i>[Signature]</i></p> <p><i>[Signature]</i></p> <p><i>[Signature]</i></p>	<p>Submitted By:</p> <p>DANILO C. TRAJANO</p> <p>Project Director</p>	<p>Reviewed By:</p> <p>JOSEFINA M. ALAGAR</p> <p>Chief, Highways Division</p>	<p>Recommended By:</p> <p>GILBERTO S. REYES</p> <p>OIC, Director IV</p>	<p>Approved By:</p> <p>MANUEL M. BONGAN</p> <p>Undersecretary</p>	<p>CABANATUAN BYPASS - CONTRACT PACKAGE II</p>		

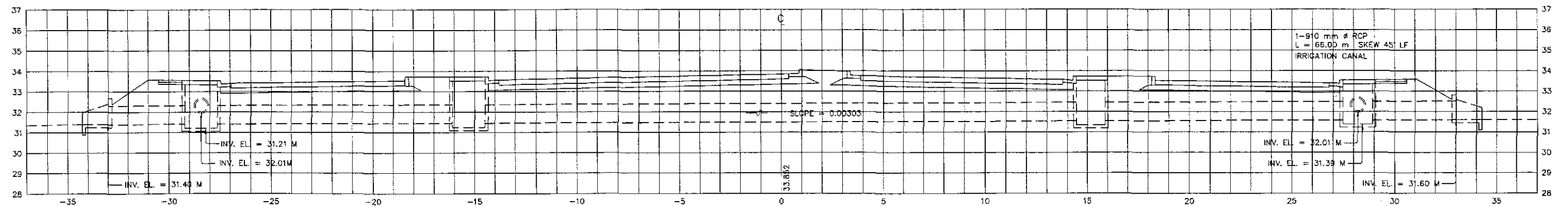
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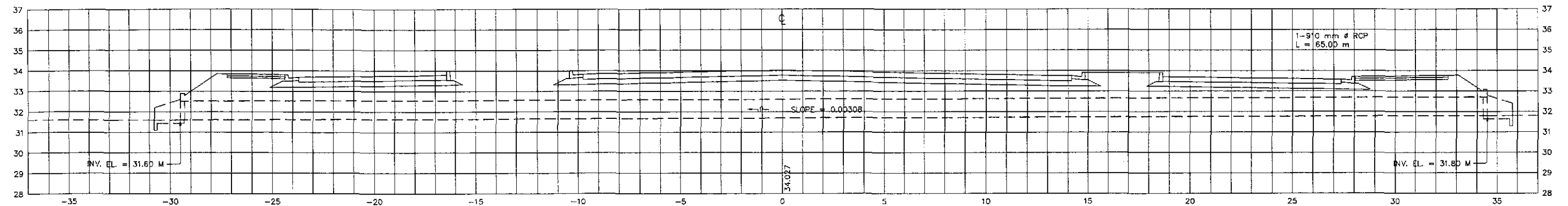
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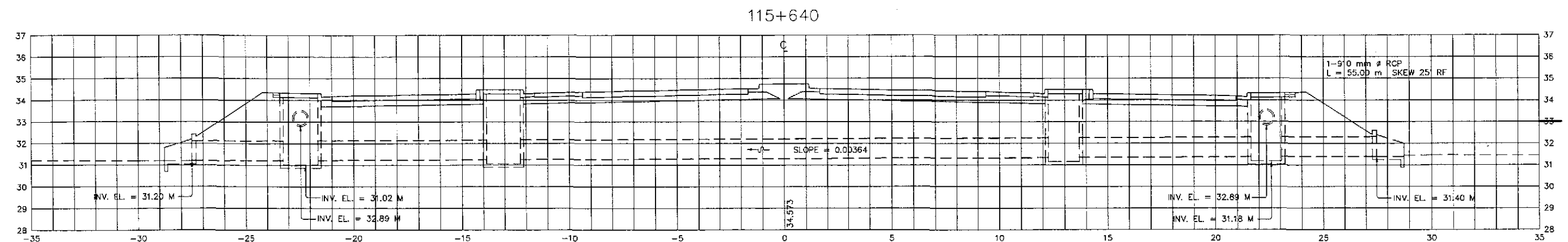
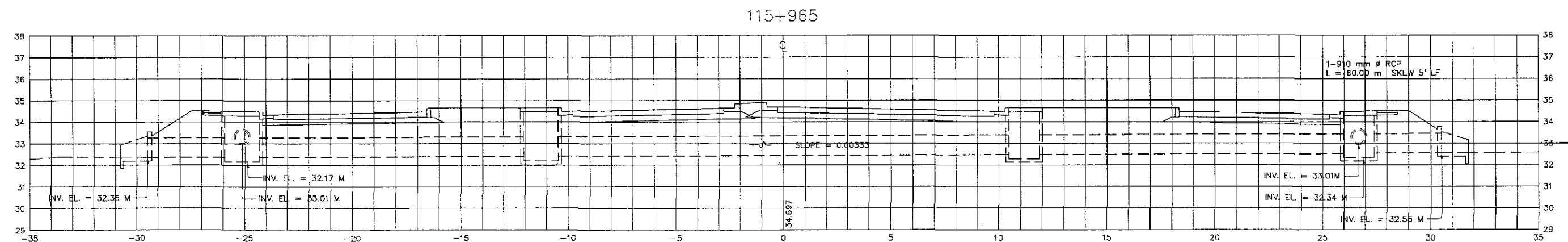
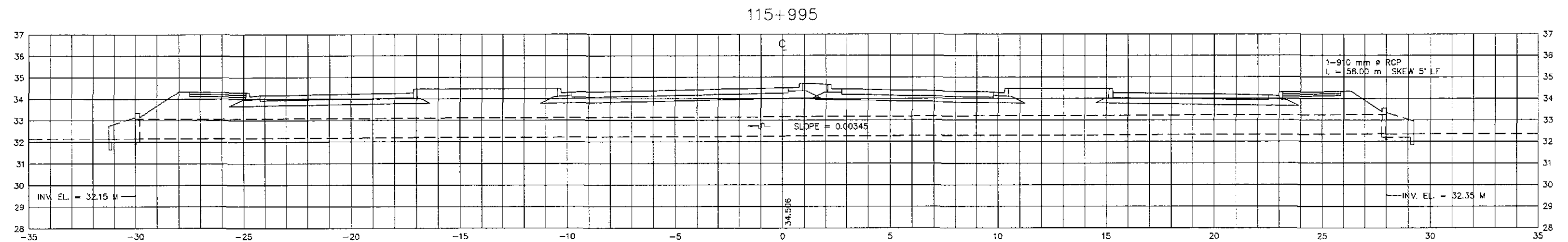
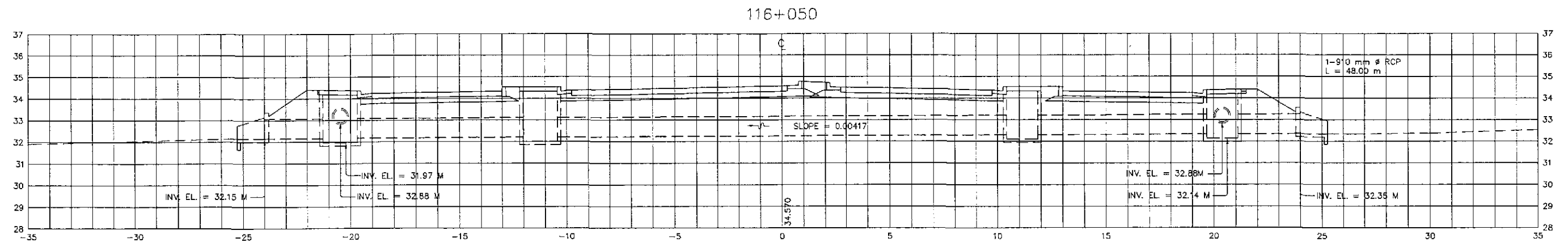
114+660



114+625

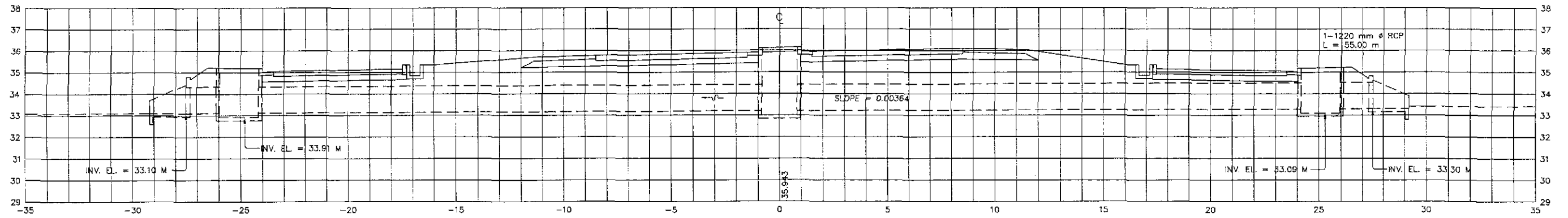


<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>KATAHIRA & ENGINEERS INTERNATIONAL</p>		<p>YACHINO ENGINEERING CO., LTD.</p>		<p>REPUBLIC OF THE PHILIPPINES</p> <p>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p> <table border="1"> <tr> <td>DESIGNED</td> <td>10/09/02</td> <td>SIGNATURE</td> <td>[Signature]</td> <td colspan="2">BUREAU OF DESIGN</td> <td colspan="2">OFFICE OF THE SECRETARY</td> </tr> <tr> <td>CHECKED</td> <td>10/16/02</td> <td>SIGNATURE</td> <td>[Signature]</td> <td>Reviewed By:</td> <td>Recommended By:</td> <td>Recommended By:</td> <td>Approved By:</td> </tr> <tr> <td>SUBMITTED</td> <td>10/18/02</td> <td>SIGNATURE</td> <td>[Signature]</td> <td>Submitted By:</td> <td>Project Director</td> <td>Chief, Highways Division</td> <td>Undersecretary</td> </tr> </table>						DESIGNED	10/09/02	SIGNATURE	[Signature]	BUREAU OF DESIGN		OFFICE OF THE SECRETARY		CHECKED	10/16/02	SIGNATURE	[Signature]	Reviewed By:	Recommended By:	Recommended By:	Approved By:	SUBMITTED	10/18/02	SIGNATURE	[Signature]	Submitted By:	Project Director	Chief, Highways Division	Undersecretary	<p>PROJECT AND LOCATION :</p> <p>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p> <p>CABANATUAN BYPASS - CONTRACT PACKAGE II</p>		<p>SCALE :</p> <p>1:100</p> <p>FULL SIZE A1</p>		<p>SHEET CONTENTS :</p> <p>DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 114+625 - STA. 115+494</p>		<p>SHEET NO. :</p> <p>DC-08</p>	
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SUBMITTED	10/18/02	SIGNATURE	[Signature]	Submitted By:	Project Director	Chief, Highways Division	Undersecretary																																		

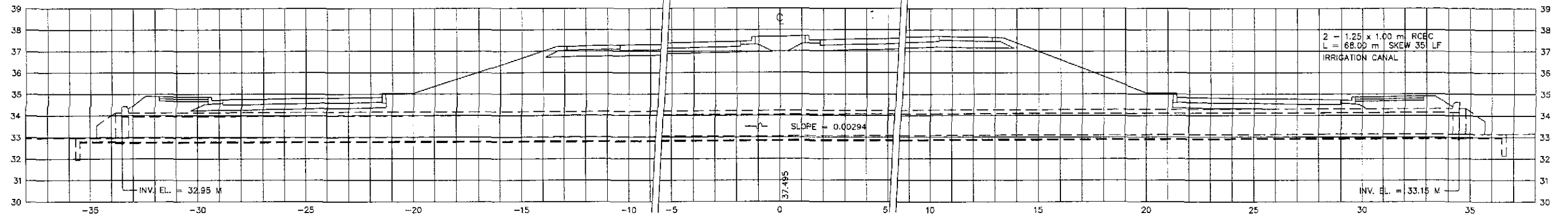


<p>JICA JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p> KATAHIRA & ENGINEERS INTERNATIONAL</p> <p> YACHIO ENGINEERING CO., LTD.</p>	<p>DATE: 10/09/02</p> <p>SIGNATURE: </p>	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>				<p>PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p>	<p>SCALE : 1:100 FULL SIZE A1</p>	<p>SHEET CONTENTS : DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 115+640 - STA. 116+050</p>	<p>SHEET NO. : DC-09</p>
	<p>DESIGNED: 10/09/02</p> <p>CHECKED: 10/10/02</p> <p>SUBMITTED: 10/18/02</p>	<p>PUBL - PWO</p> <p>Submitted By: </p> <p>DANILO C. TRAJANO Project Director</p>	<p>Reviewed By: </p> <p>JOSEFINA M. ALAGAR Chief, Highways Division</p>	<p>Recommended By: </p> <p>GILBERTO S. REYES OIC, Director IV</p>	<p>Recommended By: </p> <p>MANUEL M. BONGAN Undersecretary</p>	<p>Approved By: </p> <p>SIMEON A. DATUMANONG Secretary</p>	<p>CABANATUAN BYPASS - CONTRACT PACKAGE II</p>		

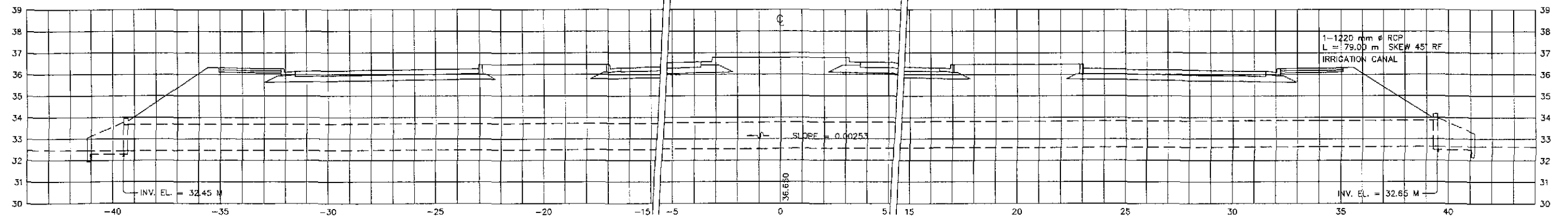
116+955



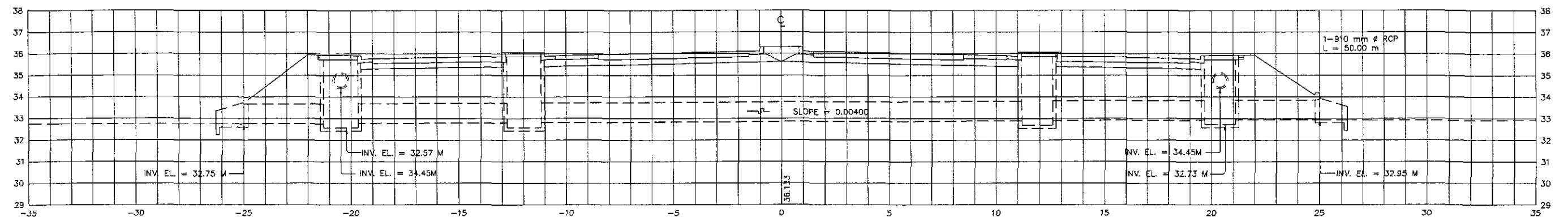
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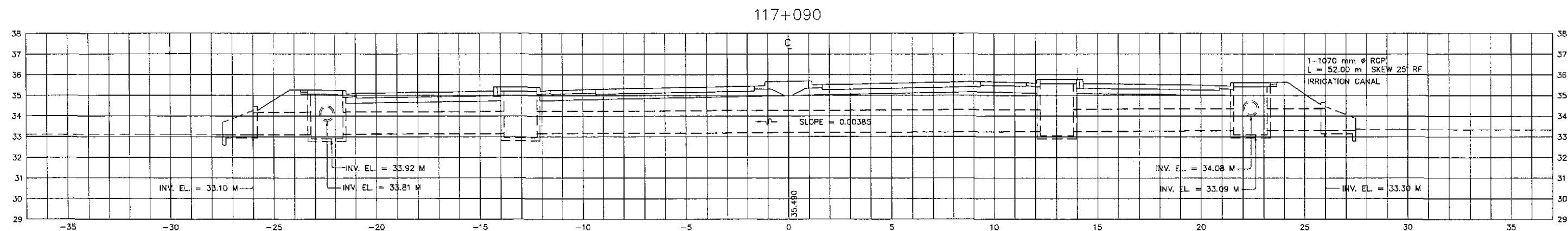
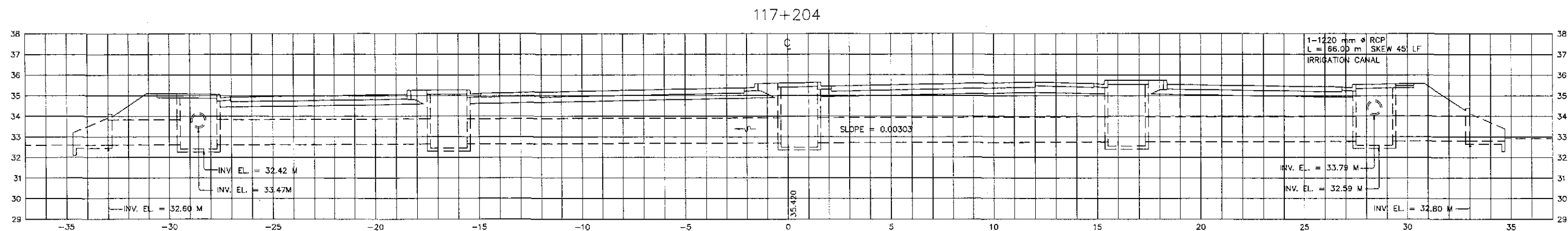
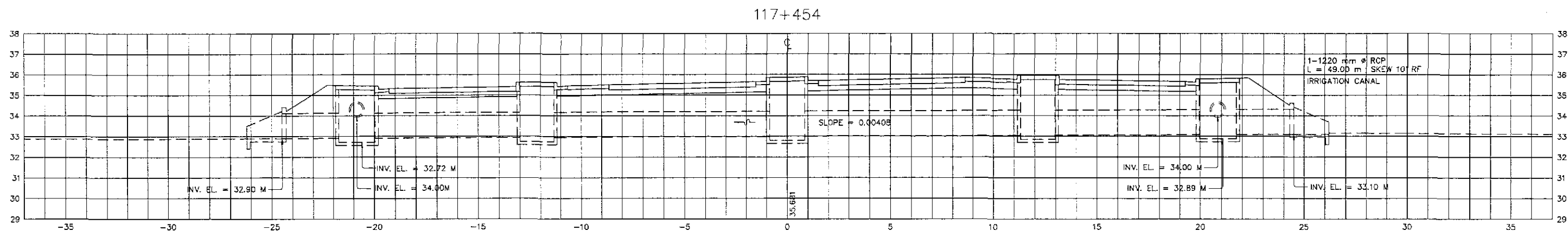
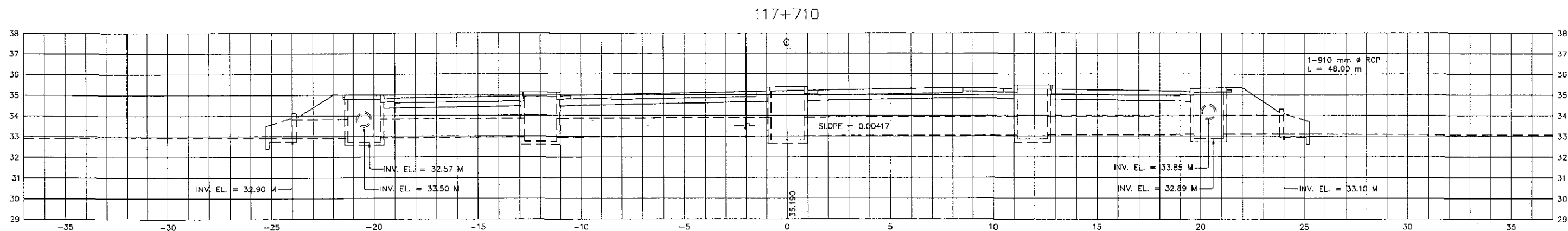
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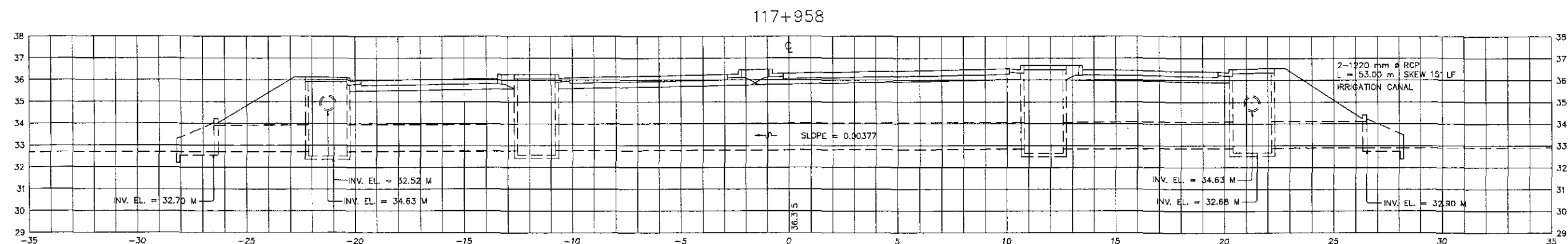
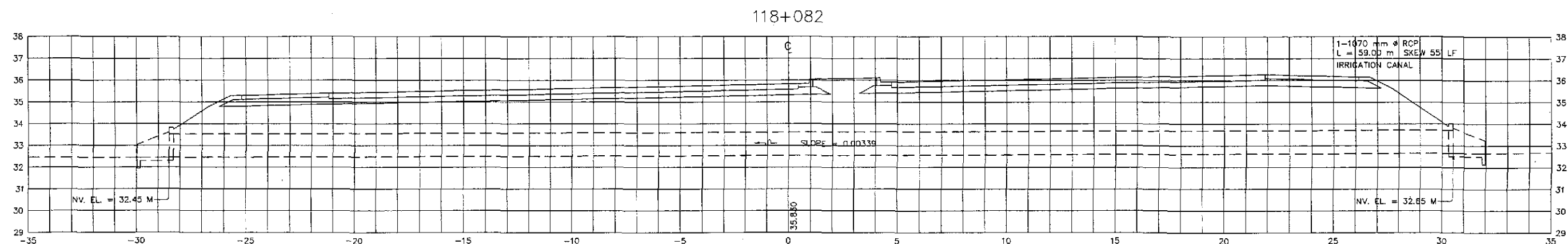
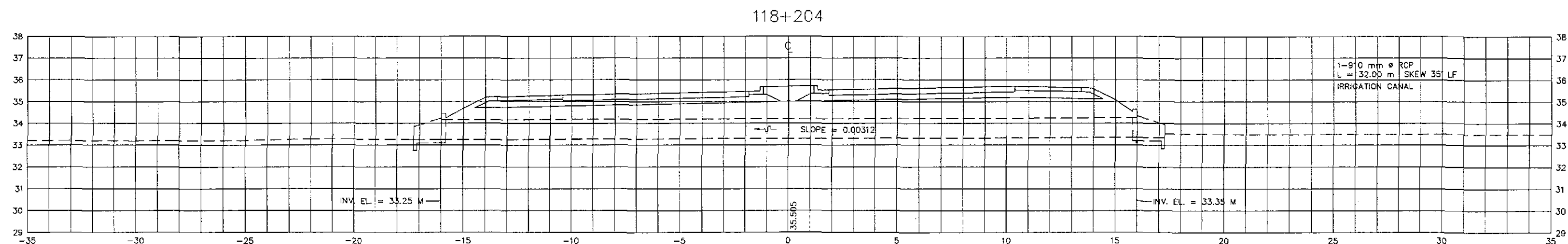
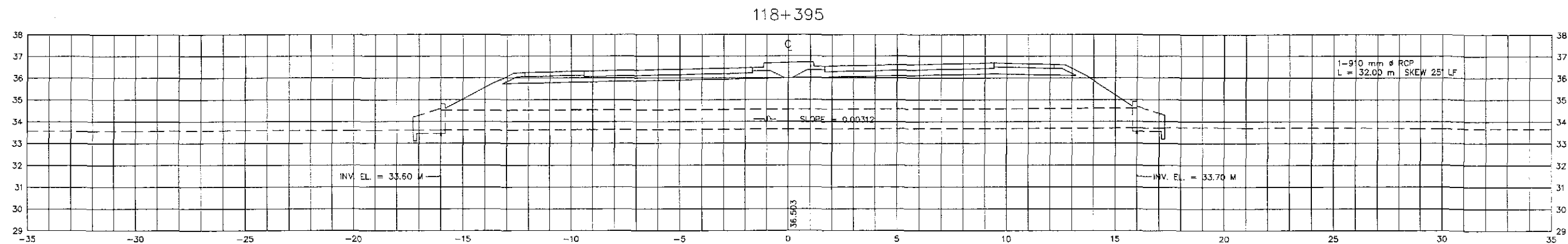
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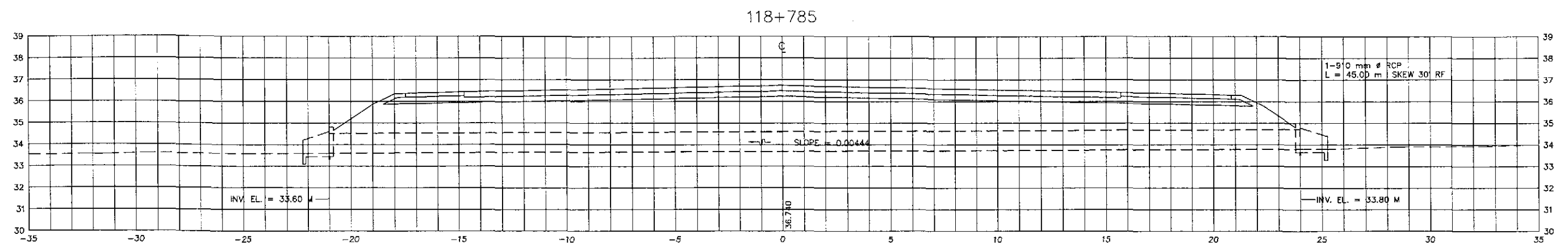
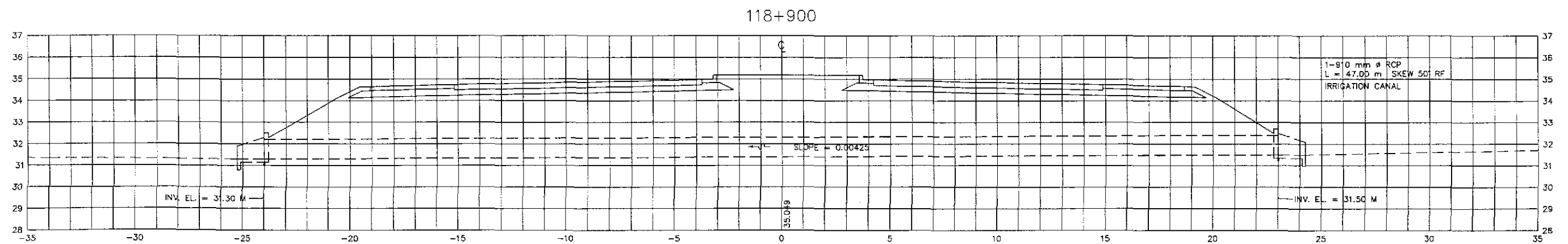
<p>JICA JAPAN INTERNATIONAL COOPERATION AGENCY</p>		<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>		<p>PROJECT AND LOCATION :</p> <p>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p>		<p>SCALE :</p> <p>1:100</p>	<p>SHEET CONTENTS :</p> <p>DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 116+340 - STA. 116+955</p>	<p>SHEET NO. :</p> <p>DC-10</p>					
DESIGNED	10/09/02	SIGNATURE		Submitted By:	DANILO C. TRAJANO Project Director	Reviewed By:	JOSEFINA M. ALAGAR Chief, Highways Division	Recommended By:	GILBERTO S. REYES DIC, Director IV	Recommended By:	MANUEL M. BONGAN Undersecretary	Approved By:	SIMEON A. DATUMANONG Secretary
CHECKED	10/10/02	SIGNATURE		Submitted By:	A. HAKIM	Reviewed By:		Recommended By:		Recommended By:		Approved By:	
SUBMITTED	10/18/02	SIGNATURE		Submitted By:	M. KUCH TEAM LEADER	Reviewed By:		Recommended By:		Recommended By:		Approved By:	



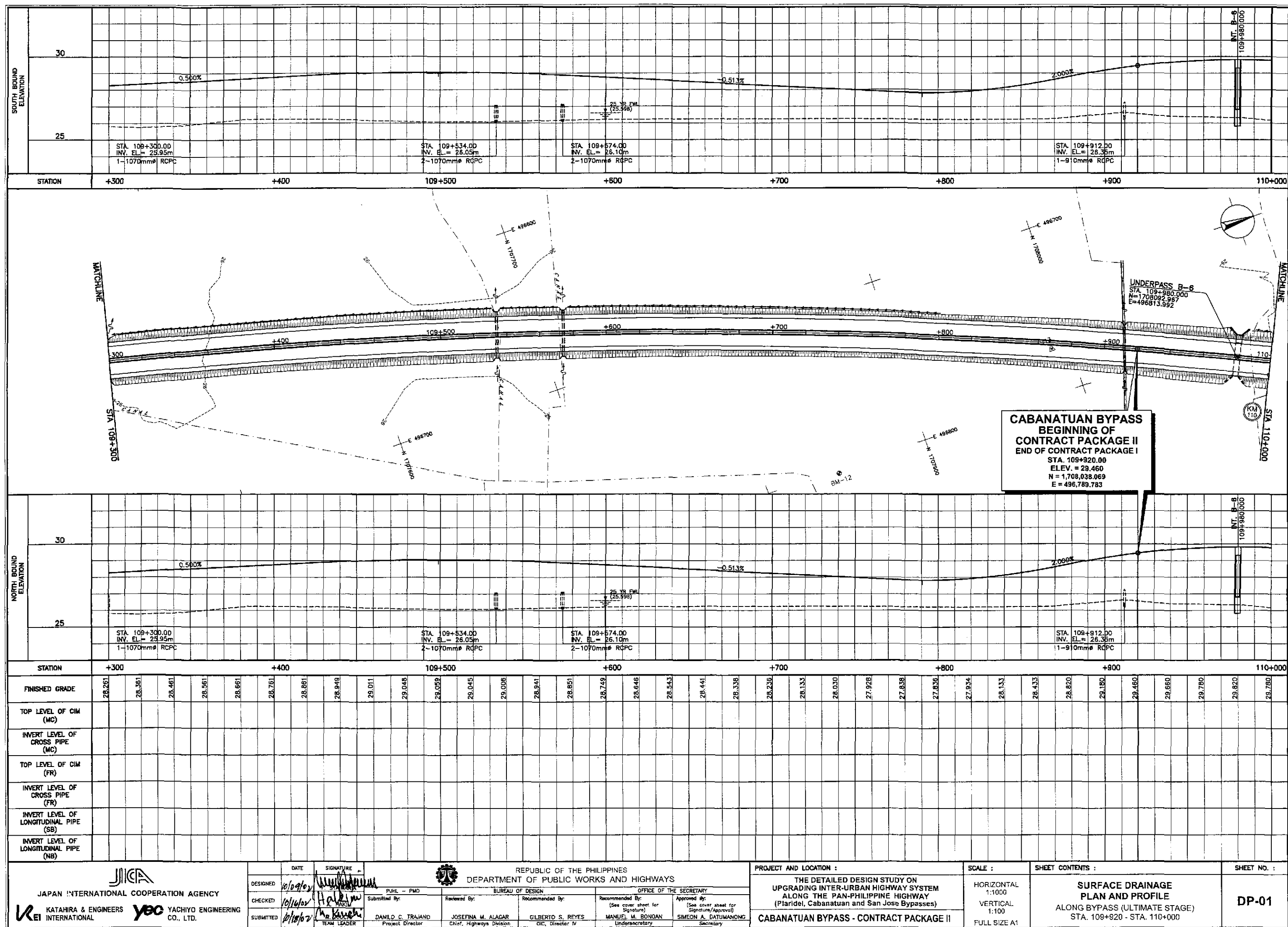
<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>KATAHIRA & ENGINEERS INTERNATIONAL</p> <p>YEO YACHIYO ENGINEERING CO., LTD.</p>	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>				<p>PROJECT AND LOCATION :</p> <p>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p> <p>CABANATUAN BYPASS - CONTRACT PACKAGE II</p>	<p>SCALE :</p> <p>1:100</p> <p>FULL SIZE A1</p>	<p>SHEET CONTENTS :</p> <p>DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 117+090 - STA. 117+710</p>	<p>SHEET NO. :</p> <p>DC-11</p>	
	DESIGNED										
	CHECKED										
	SUBMITTED										
			<p>Submitted By:</p> <p>DANILO C. TRAJANO Project Director</p>	<p>Reviewed By:</p> <p>JOSEFINA M. ALAGAR Chief, Highways Division</p>	<p>Recommended By:</p> <p>GILBERTO S. REYES OIC, Director IV</p>	<p>Recommended By:</p> <p>MANUEL M. BONGAN Undersecretary</p>	<p>Approved By:</p> <p>SIMEON A. DATUMANONG Secretary</p>				

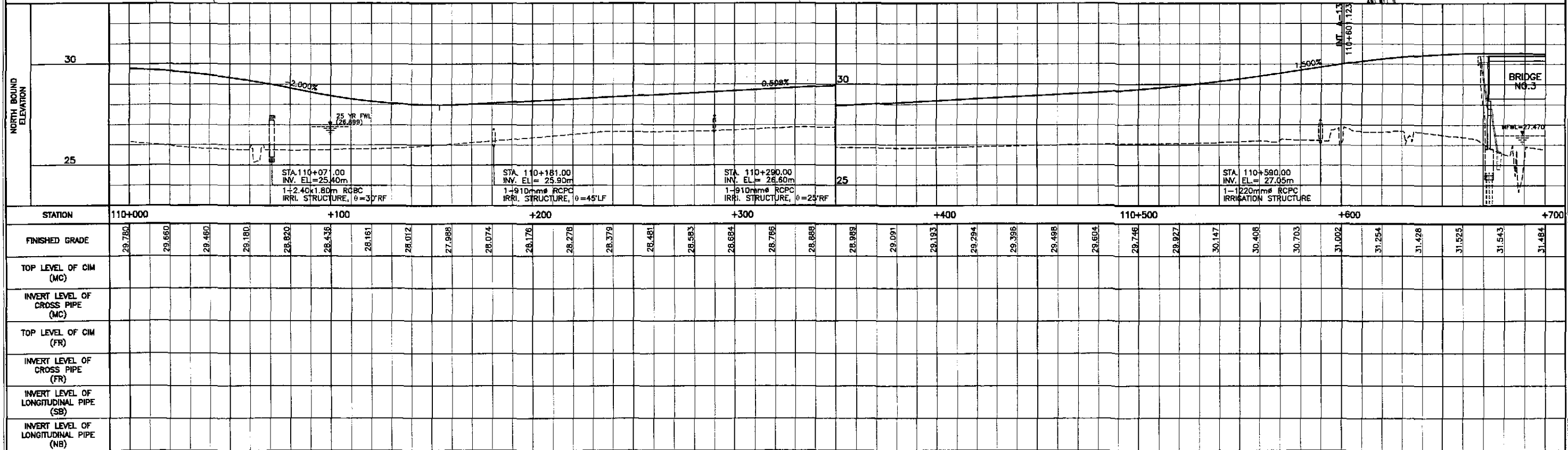
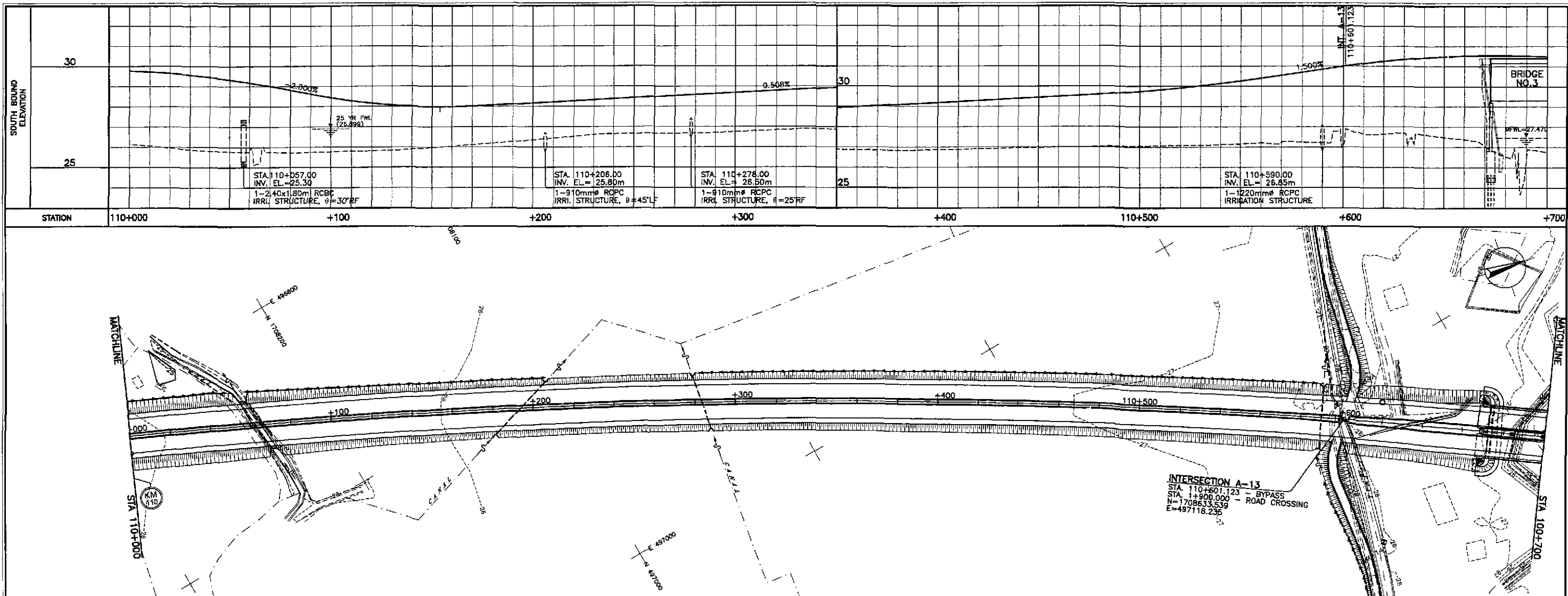




 JAPAN INTERNATIONAL COOPERATION AGENCY	DESIGNED	DATE	SIGNATURE	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :		SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/6/02	<i>[Signature]</i>		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		1:100	DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 117+958 - STA. 118+395	DC-12
	SUBMITTED	10/18/02	<i>[Signature]</i>		CABANATUAN BYPASS - CONTRACT PACKAGE II		FULL SIZE A1		
	BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director		OFFICE OF THE SECRETARY Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division		Recommended By: GILBERTO S. REYES OIC, Director IV		Approved By: MANUEL M. BONDAN Undersecretary		

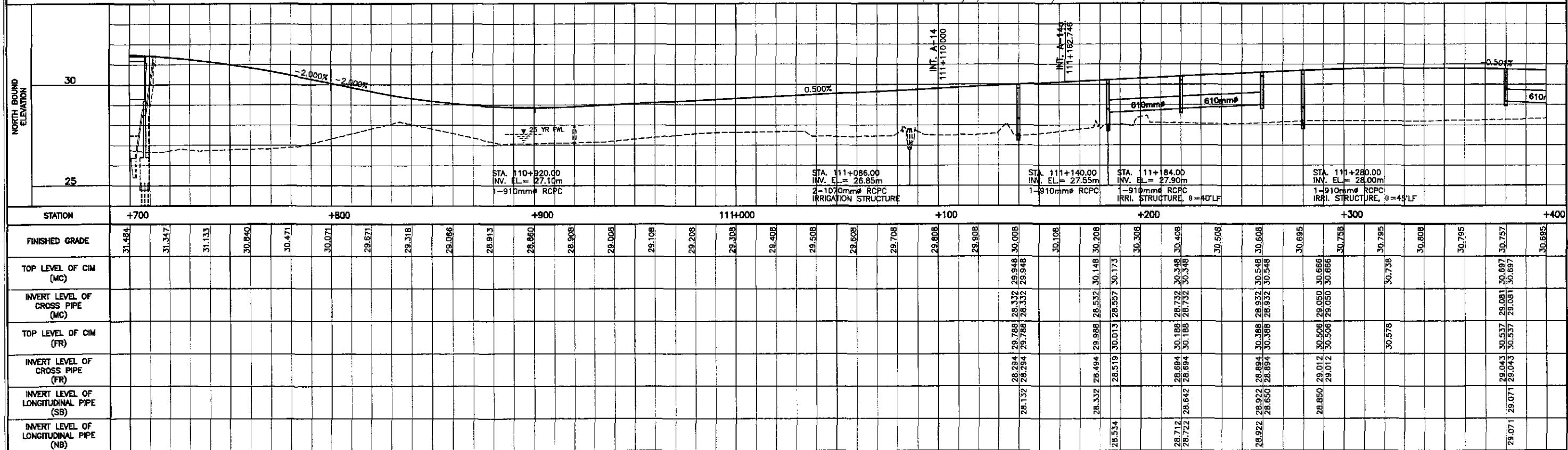
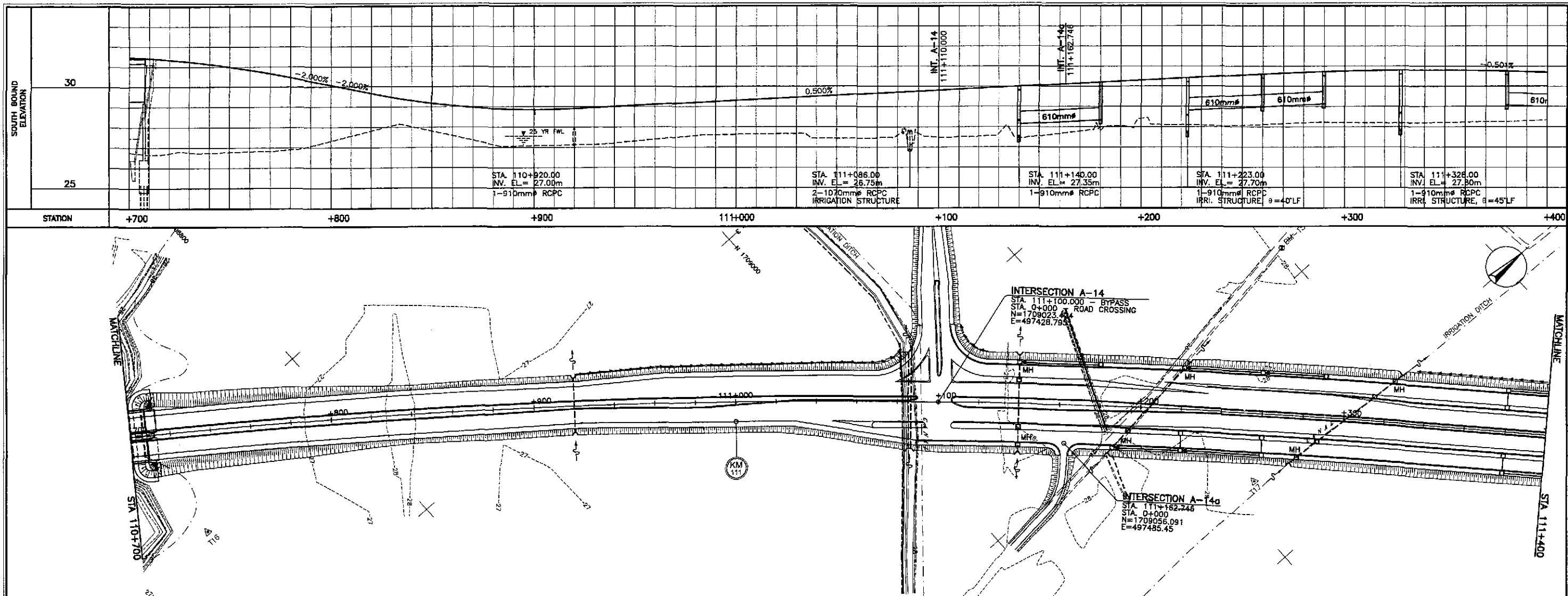


 JAPAN INTERNATIONAL COOPERATION AGENCY	DESIGNED	10/09/02		 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :				SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/16/02			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)				1:100	DRAINAGE CROSS-SECTION ALONG BYPASS (ULTIMATE STAGE) STA. 118+785 - STA. 118+900	DC-13
	SUBMITTED	10/18/02			CABANATUAN BYPASS - CONTRACT PACKAGE II				FULL SIZE A1		
	Submitted By:		Reviewed By:		Recommended By:		Approved By:				
DANILLO C. TRAJANO Project Director		JOSEFINA M. ALAGAR Chief, Highways Division		GILBERTO S. REYES OIC, Director IV		MANUEL M. BONGAN Undersecretary		SIMEON A. DATUMANONG Secretary			

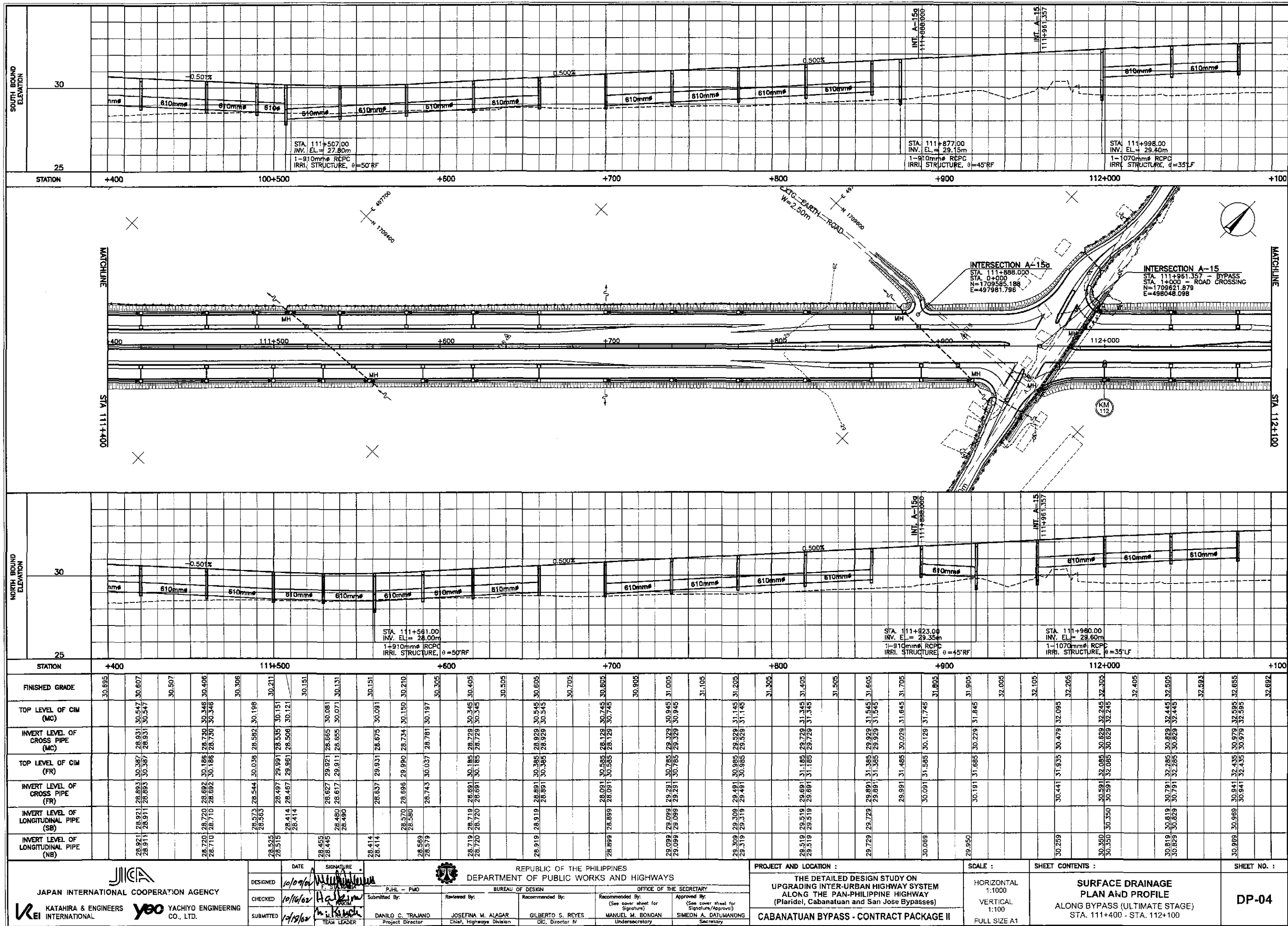


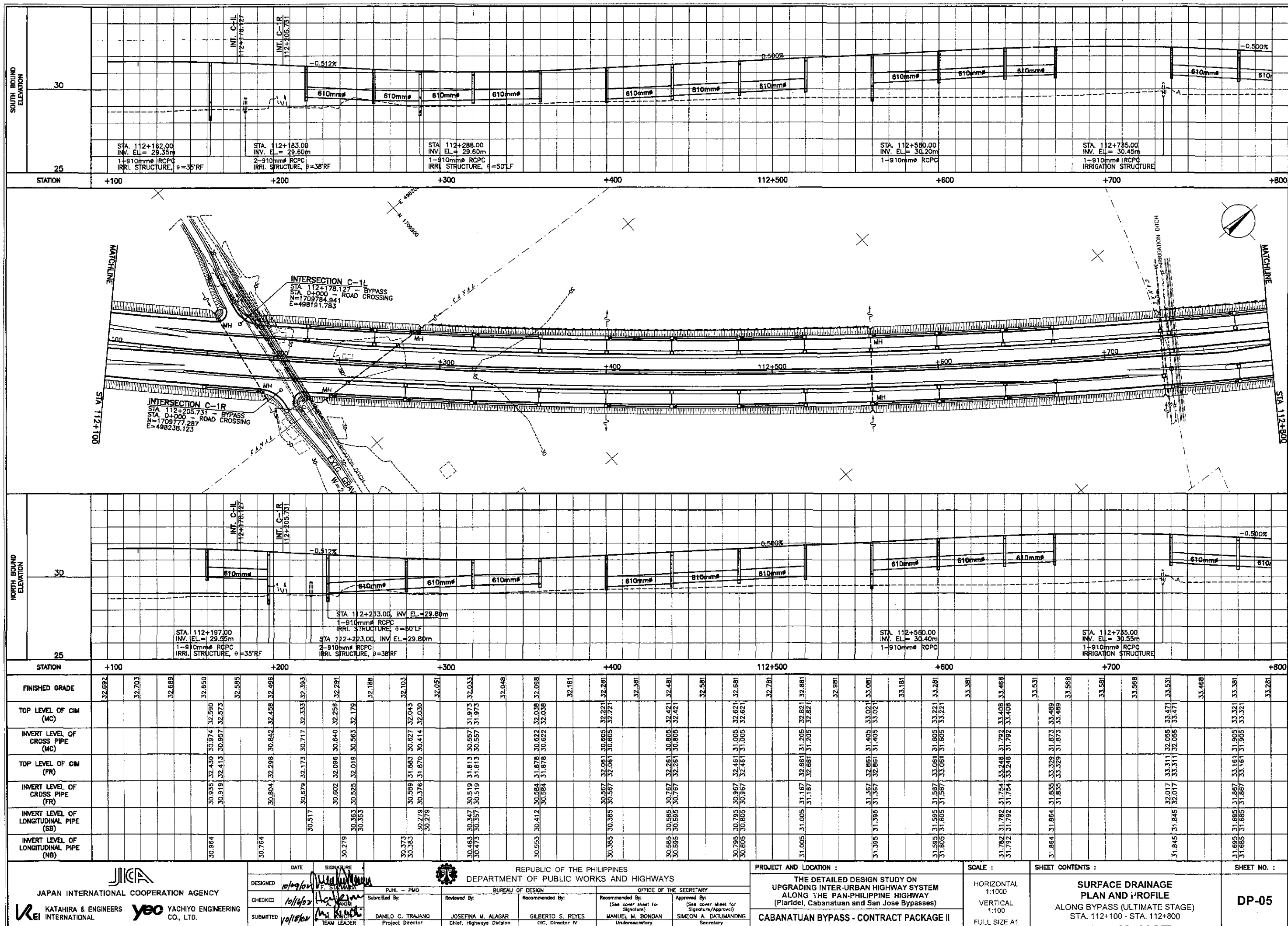


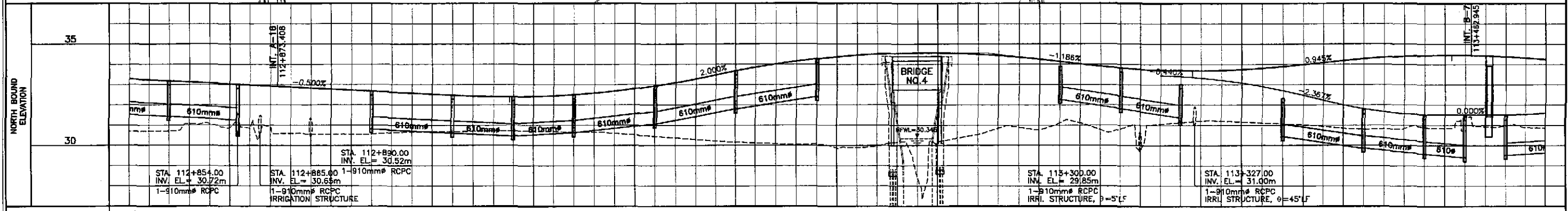
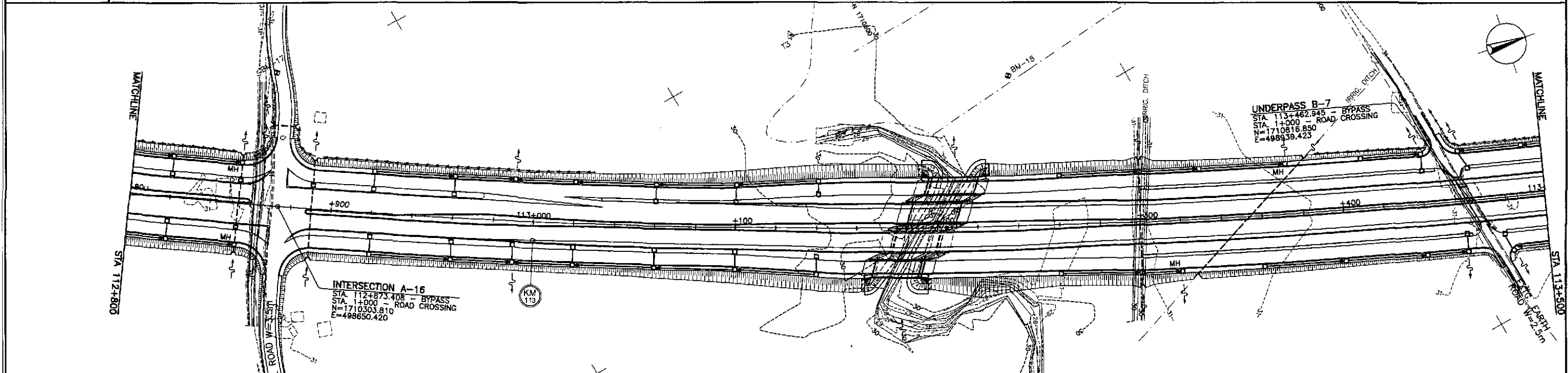
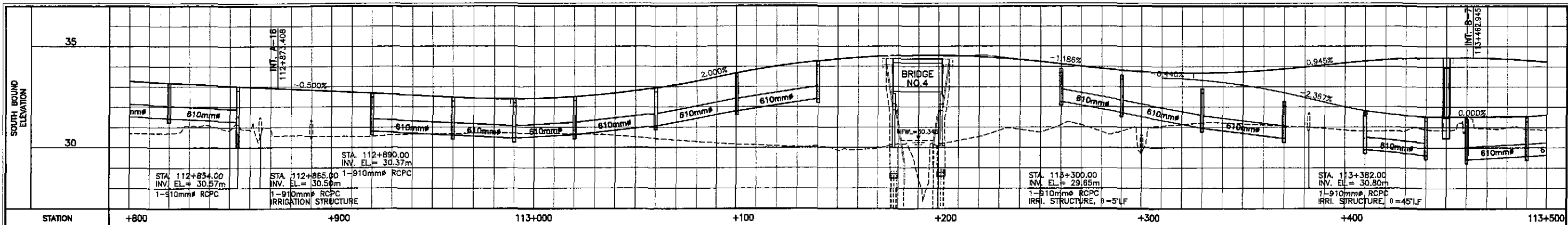
 JAPAN INTERNATIONAL COOPERATION AGENCY			 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS						PROJECT AND LOCATION :		SCALE :		SHEET CONTENTS :		SHEET NO. :					
DESIGNED <i>10/09/02</i> <i>[Signature]</i>			DATE		SIGNATURE		P.U.H.L. — P.W.O.		BUREAU OF DESIGN		OFFICE OF THE SECRETARY		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1		SURFACE DRAINAGE PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 110+000 - STA. 110+700		DP-02	
CHECKED <i>10/16/02</i> <i>[Signature]</i>			Submitted By:		Reviewed By:		Recommended By:		Approved By:											
SUBMITTED <i>10/16/02</i> <i>[Signature]</i>			DANILCO C. TRAJANO Project Director		JOSEFINA M. ALAGAR Chief, Highway Division		GILBERTO S. REYES DIC, Director IV		SIMEON A. DATUMANGING Secretary											
KATAHIRA & ENGINEERS INTERNATIONAL			YACHIRO ENGINEERING CO., LTD.																	



JICA JAPAN INTERNATIONAL COOPERATION AGENCY K&E KATAHIRA & ENGINEERS INTERNATIONAL YEO YACHIYO ENGINEERING CO., LTD.		DATE: 10/10/02 DESIGNED: [Signature] CHECKED: 10/16/02 [Signature] SUBMITTED: 10/18/02 [Signature]	PROJECT: PUNL - PMO SUBMITTED BY: DANILLO C. TRAJANO PROJECT DIRECTOR	REVIEWED BY: JOSEFINA M. ALAGAR CHIEF, HIGHWAYS DIVISION	RECOMMENDED BY: GILBERTO S. REYES OIC, DIRECTOR IV	OFFICE OF THE SECRETARY RECOMMENDED BY: MANUEL M. BONGAON UNDERSECRETARY	APPROVED BY: SIMEON A. DATUMANONG SECRETARY	PROJECT AND LOCATION: THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE II	SCALE: HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS: SURFACE DRAINAGE PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 110+700 - STA. 111+400	SHEET NO.: DP-03
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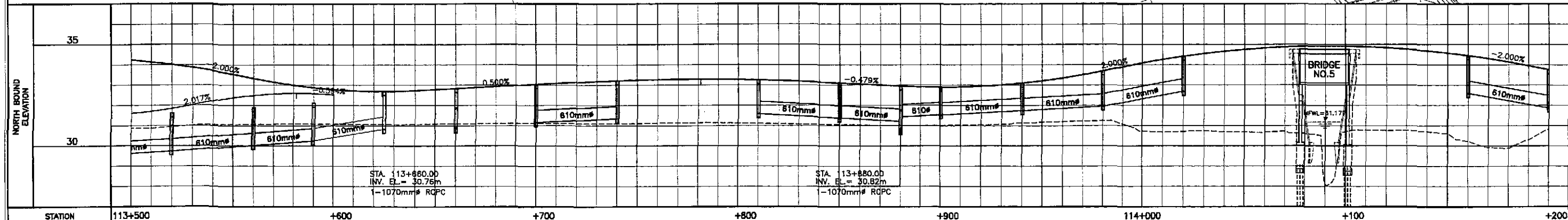
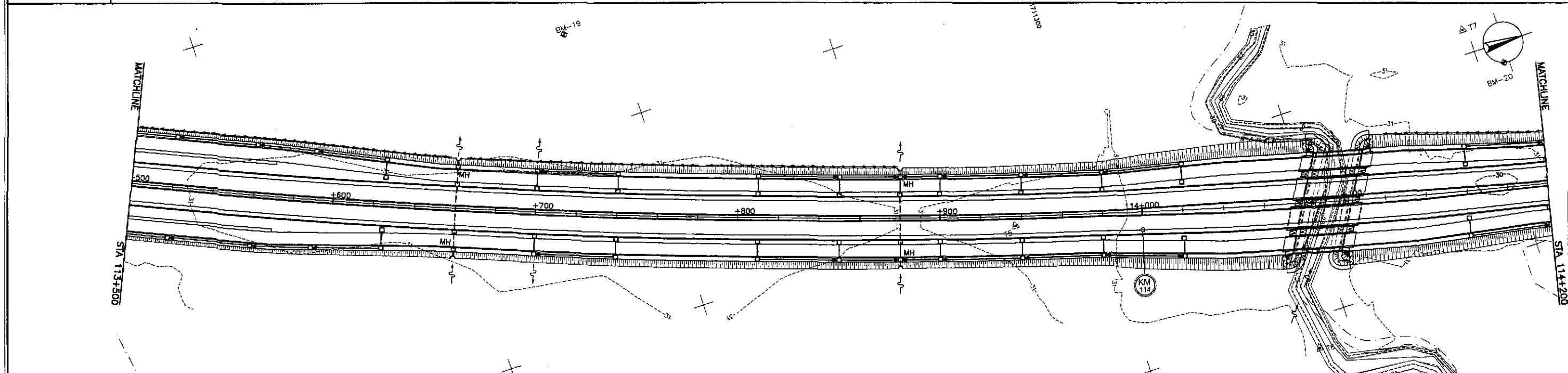
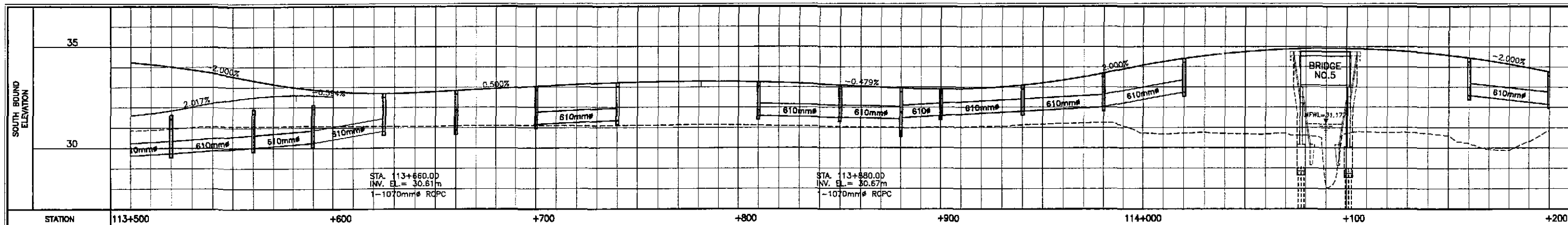






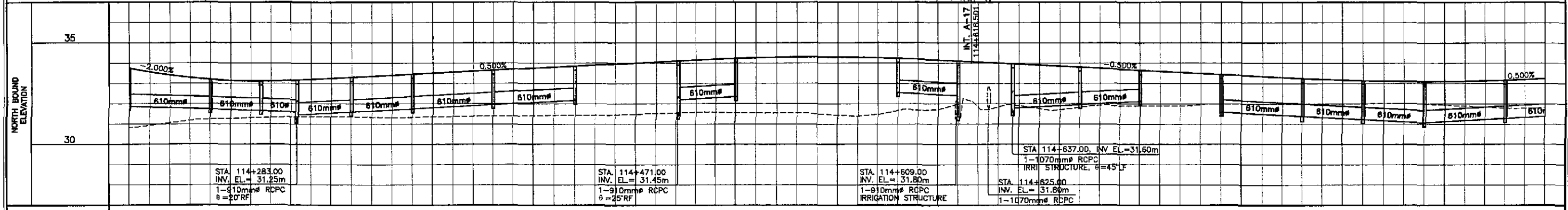
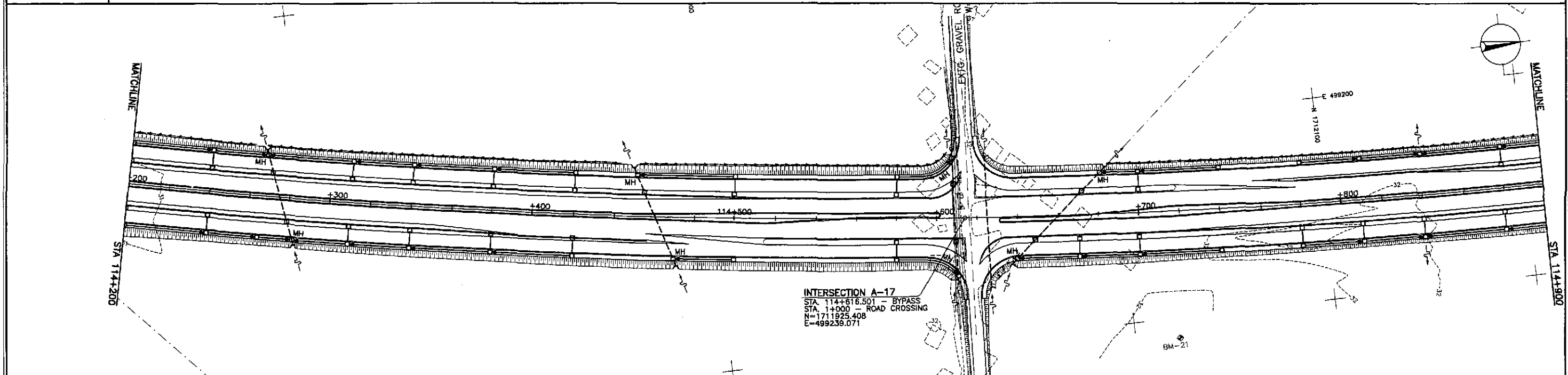
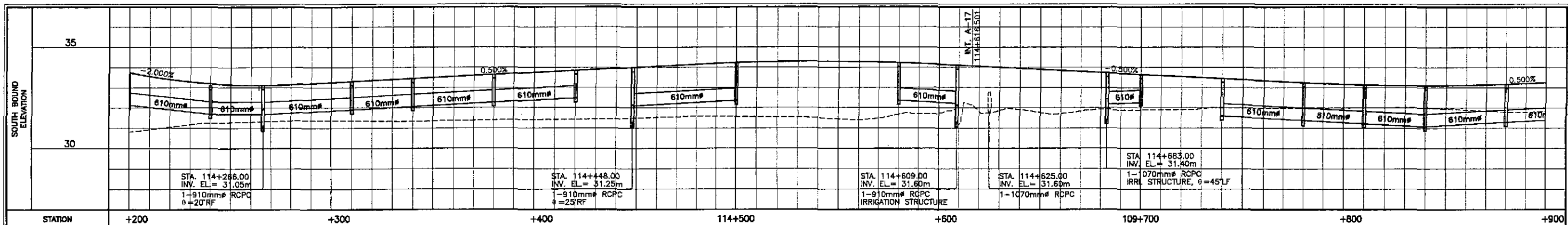
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FINISHED GRADE	33.281	33.181	33.081	32.981	32.881	32.781	32.681	32.581
TOP LEVEL OF CIM (MC)		33.121	33.021	32.921	32.821	32.721	32.621	32.521
INVERT LEVEL OF CROSS PIPE (MC)		31.705	31.605	31.505	31.405	31.305	31.205	31.105
TOP LEVEL OF CIM (FR)		32.961	32.861	32.761	32.661	32.561	32.461	32.361
INVERT LEVEL OF CROSS PIPE (FR)		31.667	31.567	31.467	31.367	31.267	31.167	31.067
INVERT LEVEL OF LONGITUDINAL PIPE (SB)	31.495	31.485	31.325	31.225	31.125	31.025	30.925	30.825
INVERT LEVEL OF LONGITUDINAL PIPE (NB)	31.485	31.475	31.315	31.215	31.115	31.015	30.915	30.815

JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS YEO YACHIYO ENGINEERING CO., LTD.		DATE: 10/07/20 DESIGNED: [Signature] CHECKED: [Signature] SUBMITTED: [Signature]		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN OFFICE OF THE SECRETARY PROJECT AND LOCATION: THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Palarod, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE II		SCALE: HORIZONTAL 1:1000, VERTICAL 1:100, FULL SIZE A1 SHEET CONTENTS: SURFACE DRAINAGE PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 112+800 - STA. 113+500		SHEET NO.: DP-06	
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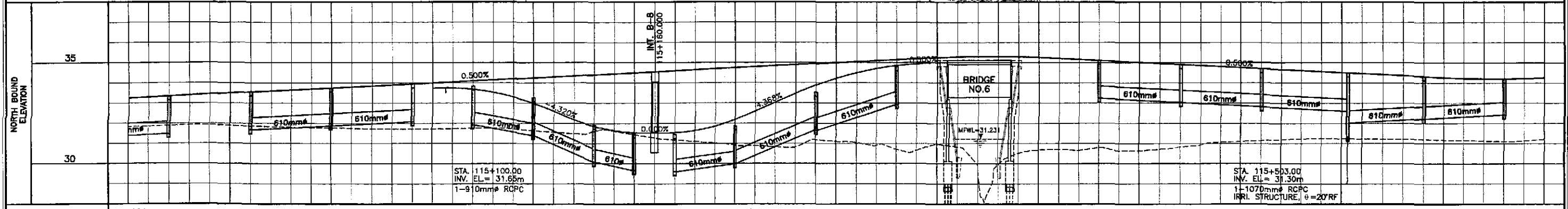
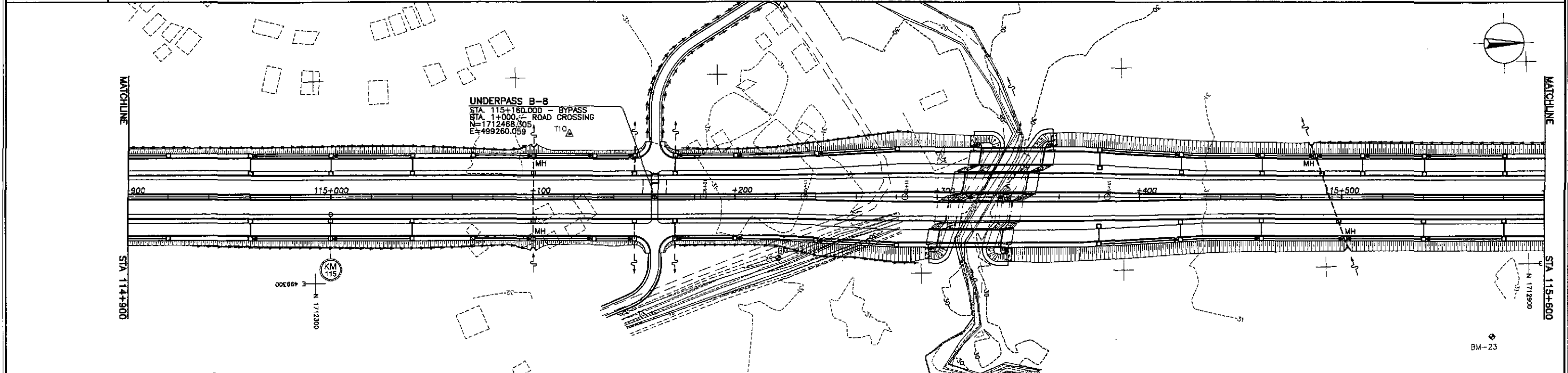
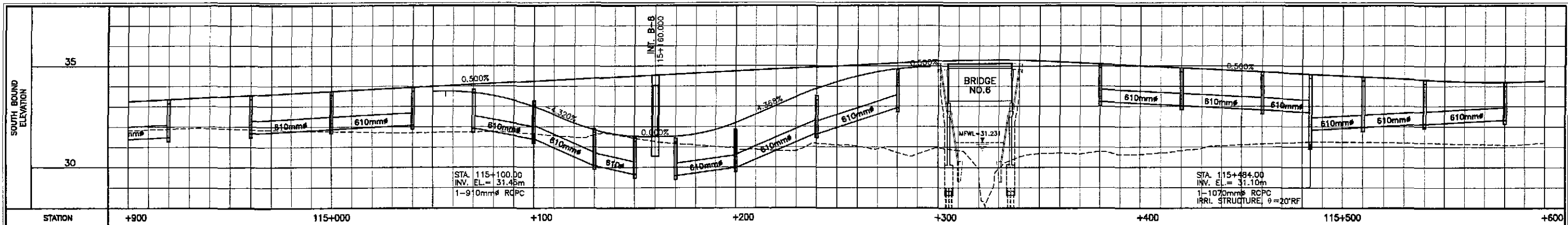
STATION	113+500	+600	+700	+800	+900	114+000	+100	+200
FINISHED GRADE	34.238 31.603	34.014 31.845	33.712 32.223	33.335 32.436	32.997 32.594	32.785 32.525	32.637 32.637	32.735 32.835 32.935 33.035 33.135 33.218 33.289 33.288 33.274 33.227 33.147 33.052 32.956 32.906 32.954 33.042 33.102 33.349 34.088 34.414 34.659 34.825 34.910 34.916 34.842 34.687 34.453 34.139 33.752
TOP LEVEL OF CIM (MC)								
INVERT LEVEL OF CROSS PIPE (MC)								
TOP LEVEL OF CIM (FR)		31.394 31.394	31.679 31.679	31.895 31.895				
INVERT LEVEL OF CROSS PIPE (FR)								
INVERT LEVEL OF LONGITUDINAL PIPE (SB)	30.821 30.821	30.821 30.821	30.821 30.821	30.821 30.821	30.821 30.821	30.821 30.821	30.821 30.821	30.821 30.821
INVERT LEVEL OF LONGITUDINAL PIPE (NB)	30.821 30.821	30.821 30.821	30.821 30.821	30.821 30.821	30.821 30.821	30.821 30.821	30.821 30.821	30.821 30.821

JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS YEO YACHIYO ENGINEERING CO., LTD.		DATE: 10/09/12 DESIGNED: [Signature] CHECKED: 10/10/12 SUBMITTED: 10/18/12	SIGNATURE: [Signature] P.U.H.L. - PMO Submitted By: DANLO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By: JOSEFINA M. ALAGAR Chief, Highway Division	OFFICE OF THE SECRETARY Recommended By: GILBERTO S. REYES OIC, Director IV Recommended By: MANUEL M. BONQAN Undersecretary Approved By: SIMON A. DATUMANONG Secretary	PROJECT AND LOCATION: THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE II	SCALE: HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS: SURFACE DRAINAGE PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 113+500 - STA. 114+200	SHEET NO.: DP-07
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STATION	+200	+300	+400	114+500	+600	+700	+800	+900
FINISHED GRADE	33.752	33.414	33.202	33.114	33.152	33.252	33.168	33.252
TOP LEVEL OF CIM (MC)	33.892	33.892	33.142	33.142	33.892	33.892	33.192	33.192
INVERT LEVEL OF CROSS PIPE (MC)	32.076	32.076	31.826	31.826	32.076	32.076	31.826	31.826
TOP LEVEL OF CIM (FR)	33.532	33.532	33.282	33.282	33.532	33.532	33.282	33.282
INVERT LEVEL OF CROSS PIPE (FR)	32.038	32.038	31.788	31.788	32.038	32.038	31.788	31.788
INVERT LEVEL OF LONGITUDINAL PIPE (SB)	31.876	31.876	31.626	31.626	31.876	31.876	31.626	31.626
INVERT LEVEL OF LONGITUDINAL PIPE (NB)	31.876	31.876	31.626	31.626	31.876	31.876	31.626	31.626

 JAPAN INTERNATIONAL COOPERATION AGENCY		 KATAHIRA & ENGINEERS		 YACHIYO ENGINEERING CO., LTD.	
DESIGNED	10/09/02	SIGNATURE			
CHECKED	10/09/02	SIGNATURE			
SUBMITTED	10/09/02	SIGNATURE			
PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Palarid, Cabanatuan and San Jose Bypasses)		SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1			
SHEET NO. : DP-08		SHEET CONTENTS : SURFACE DRAINAGE PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 114+200 - STA. 114+900			



STATION	+900	+115+000	+100	+200	+300	+400	+115+500	+600
FINISHED GRADE	33.252	33.352	33.452	33.552	33.652	33.752	33.852	33.952
TOP LEVEL OF CIM (MC)		33.292	33.392	33.492	33.592	33.692	33.792	33.892
INVERT LEVEL OF CROSS PIPE (MC)		31.676	31.676	31.676	31.676	31.676	31.676	31.676
TOP LEVEL OF CIM (FR)		33.132	33.232	33.332	33.432	33.532	33.632	33.732
INVERT LEVEL OF CROSS PIPE (FR)		31.638	31.638	31.638	31.638	31.638	31.638	31.638
INVERT LEVEL OF LONGITUDINAL PIPE (SB)		31.476	31.476	31.476	31.476	31.476	31.476	31.476
INVERT LEVEL OF LONGITUDINAL PIPE (NB)		31.476	31.476	31.476	31.476	31.476	31.476	31.476

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS
INTERNATIONAL

YEO
YACHIYO ENGINEERING CO., LTD.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

BUREAU OF DESIGN

Designed By: *[Signature]*
Checked By: *[Signature]*
Submitted By: *[Signature]*

OFFICE OF THE SECRETARY

Recommended By: *[Signature]*
Approved By: *[Signature]*

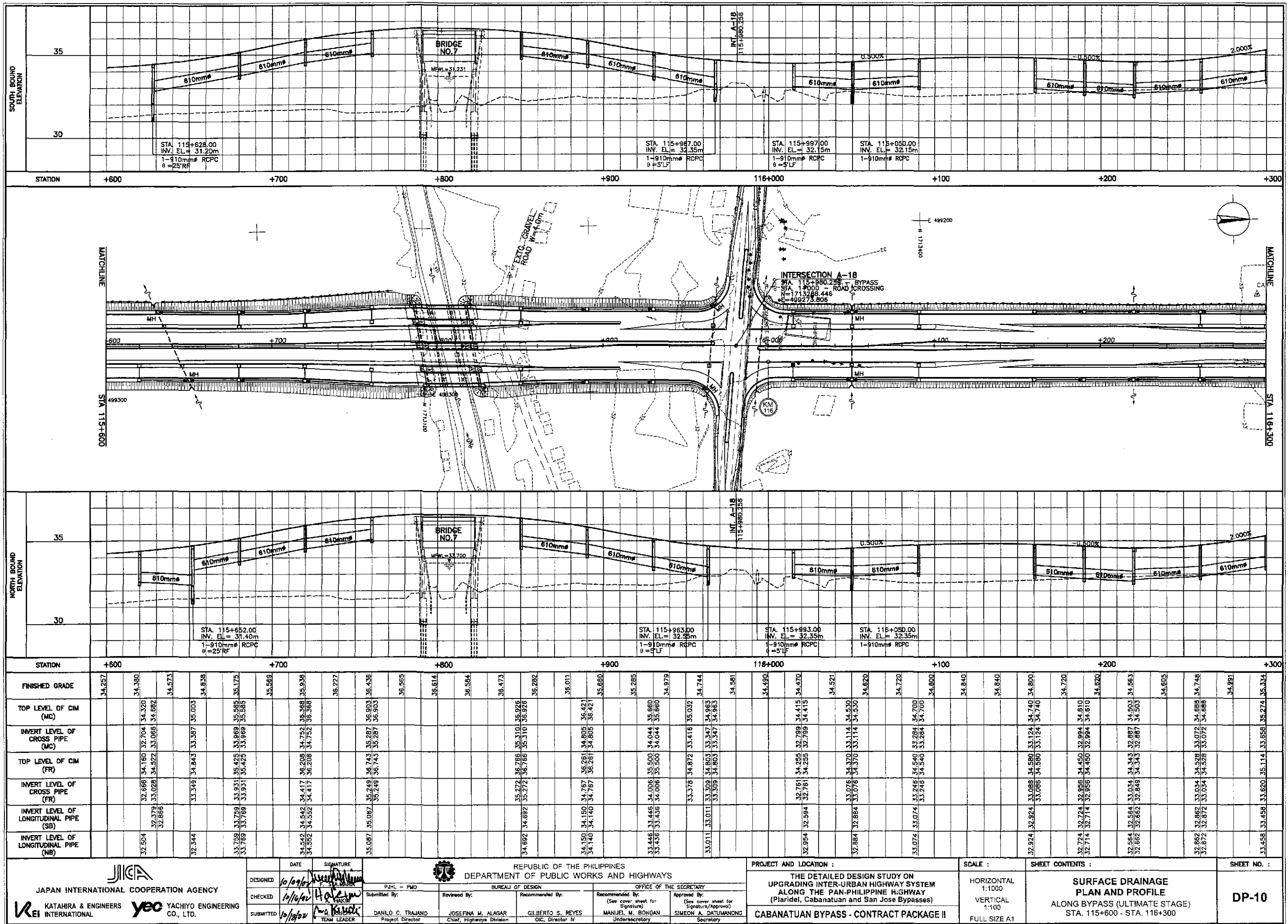
PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Paridel, Cabanatuan and San Jose Bypasses)

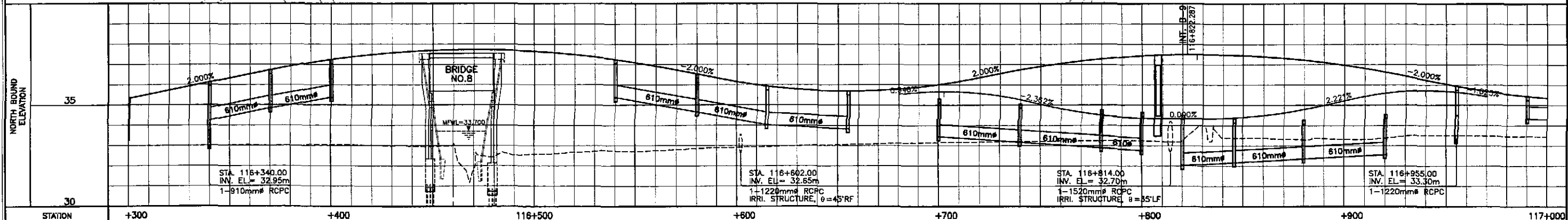
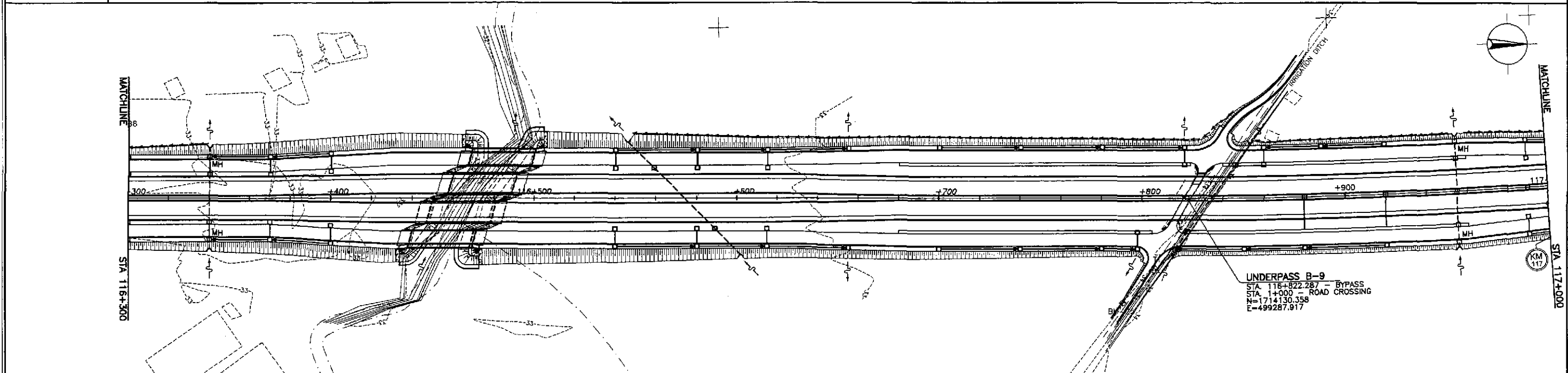
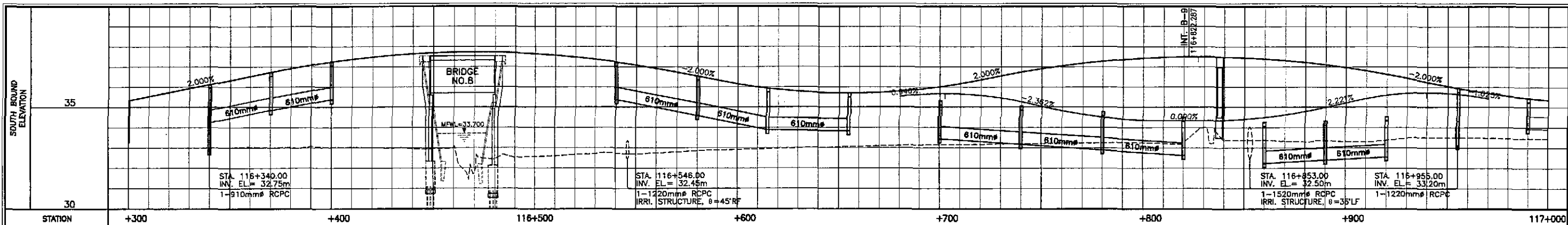
CABANATUAN BYPASS - CONTRACT PACKAGE II

SCALE :
HORIZONTAL 1:1000
VERTICAL 1:100
FULL SIZE A1

SHEET CONTENTS :
**SURFACE DRAINAGE
PLAN AND PROFILE**
ALONG BYPASS (ULTIMATE STAGE)
STA. 114+900 - STA. 115+600

SHEET NO. :
DP-09





STATION	+300	+400	116+500	+600	+700	+800	+900	117+000
FINISHED GRADE	35.334	35.733	37.241	37.241	37.241	37.241	37.241	37.241
TOP LEVEL OF CIM (MC)	35.274	35.274	37.181	37.181	37.181	37.181	37.181	37.181
INVERT LEVEL OF CROSS PIPE (MC)	33.658	33.658	35.565	35.565	35.565	35.565	35.565	35.565
TOP LEVEL OF CIM (FR)	35.114	35.114	37.021	37.021	37.021	37.021	37.021	37.021
INVERT LEVEL OF CROSS PIPE (FR)	33.620	33.620	35.529	35.529	35.529	35.529	35.529	35.529
INVERT LEVEL OF LONGITUDINAL PIPE (SB)	33.458	33.458	35.367	35.367	35.367	35.367	35.367	35.367
INVERT LEVEL OF LONGITUDINAL PIPE (NB)	33.458	33.458	35.367	35.367	35.367	35.367	35.367	35.367

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KAI
KATAHIRA & ENGINEERS

YEO
YACHIYO ENGINEERING CO., LTD.

DESIGNED: 10/09/02

CHECKED: 10/10/02

SUBMITTED: 10/10/02

DATE: 10/09/02

SIGNATURE: [Signature]

PROJECT DIRECTOR: DANILLO C. TRAJANO

CHIEF, HIGHWAYS DIVISION: JOSEFINA M. ALACAR

CHIEF, DIRECTOR IV: GILBERTO S. REYES

UNDERSECRETARY: MANUEL M. BONOAN

SECRETARY: SIMEON A. DATUMANONG

REPUBLIC OF THE PHILIPPINES

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

BUREAU OF DESIGN

OFFICE OF THE SECRETARY

PROJECT AND LOCATION:

THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)

CABANATUAN BYPASS - CONTRACT PACKAGE II

SCALE:

HORIZONTAL: 1:1000

VERTICAL: 1:100

FULL SIZE A1

SHEET CONTENTS:

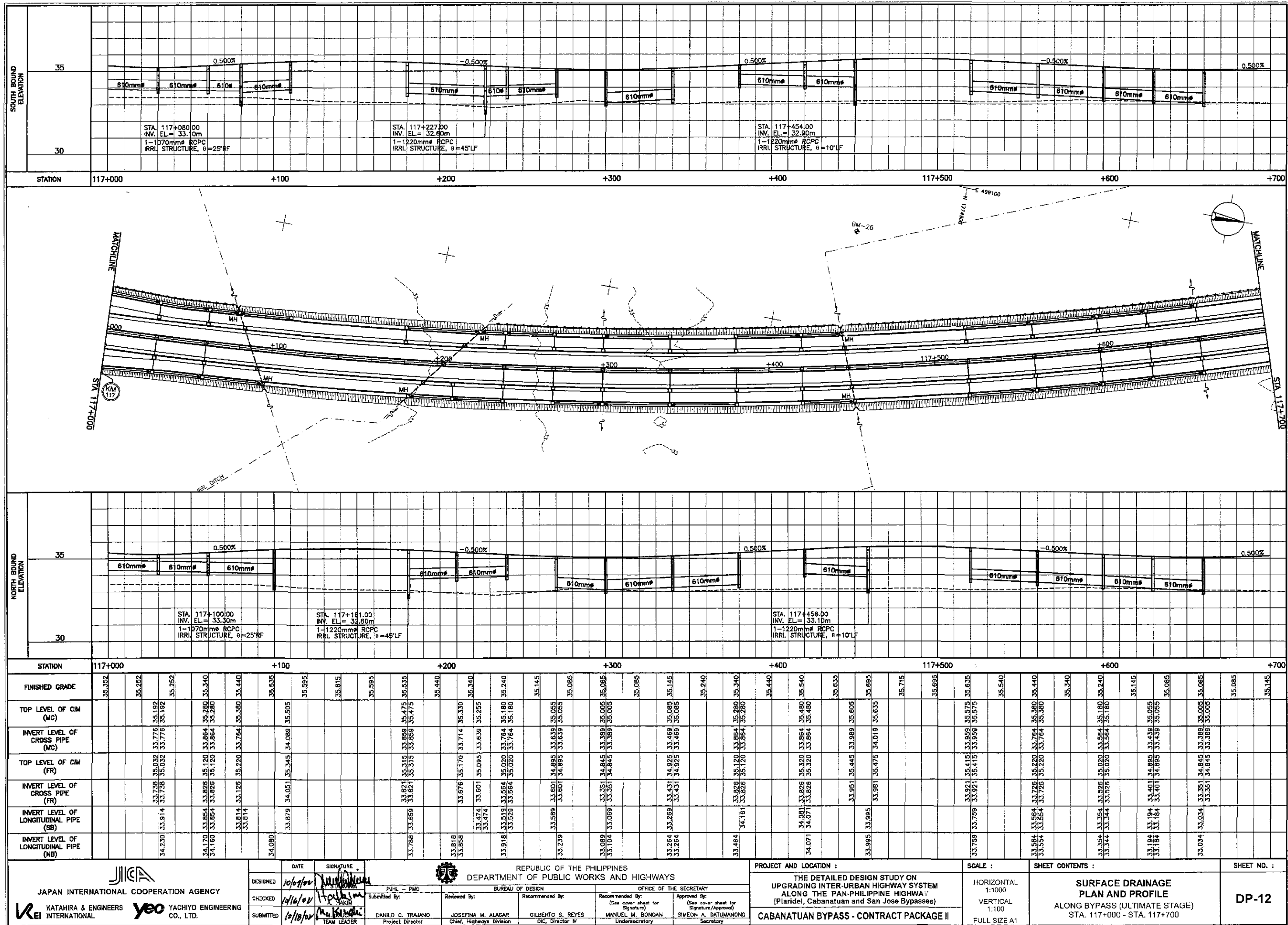
SURFACE DRAINAGE PLAN AND PROFILE

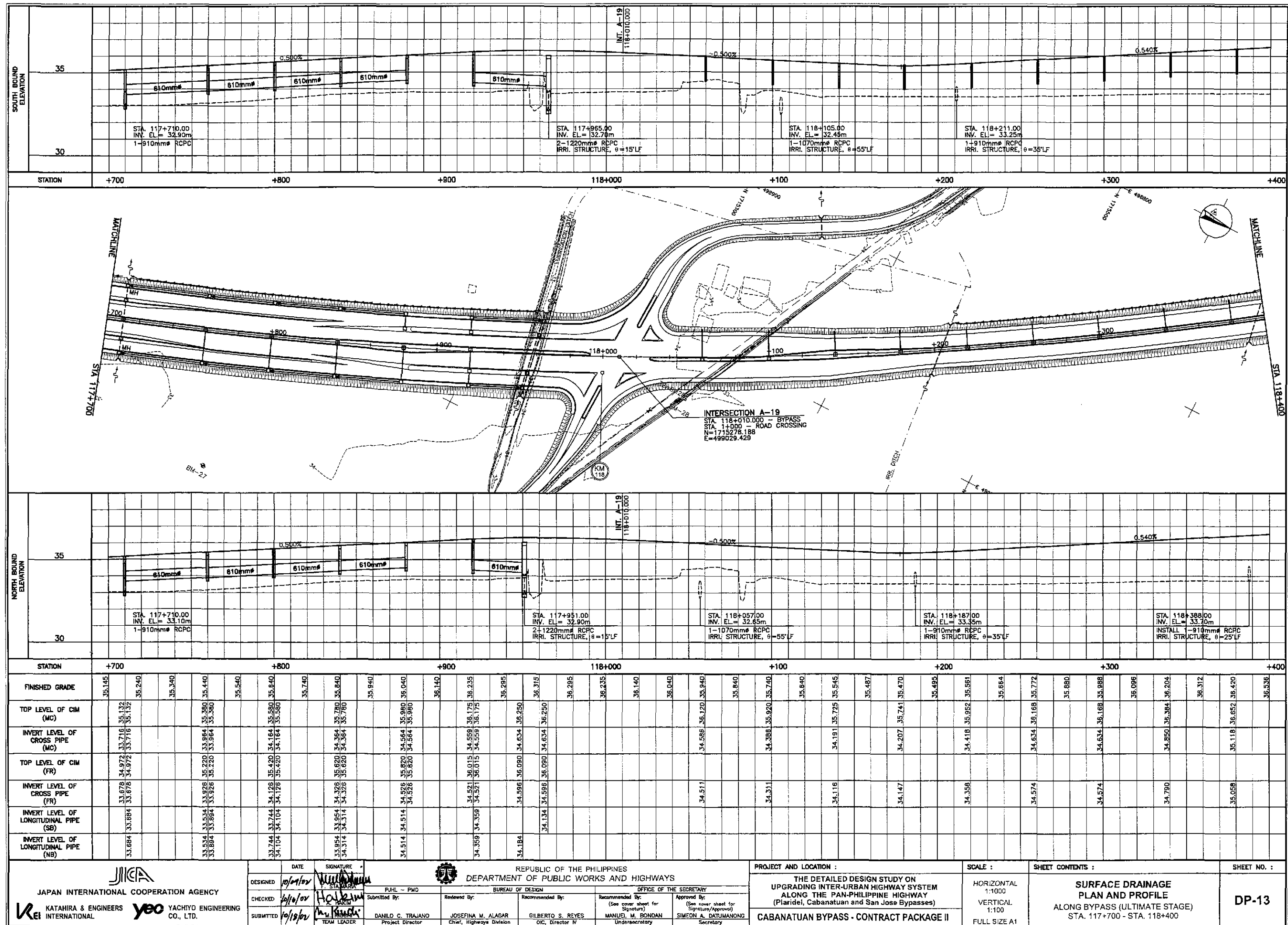
ALONG BYPASS (ULTIMATE STAGE)

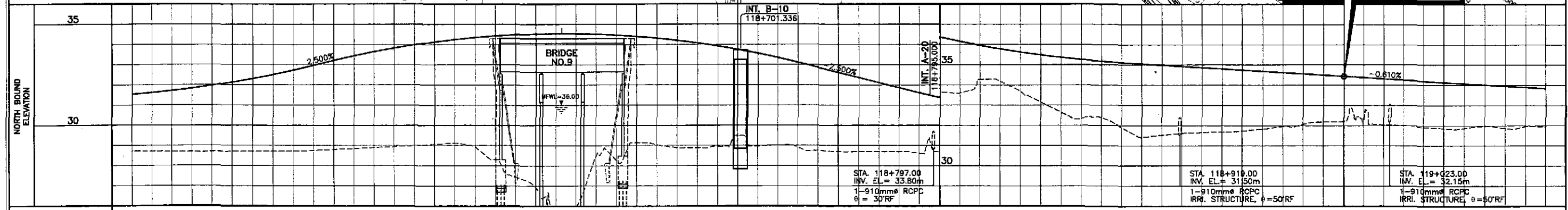
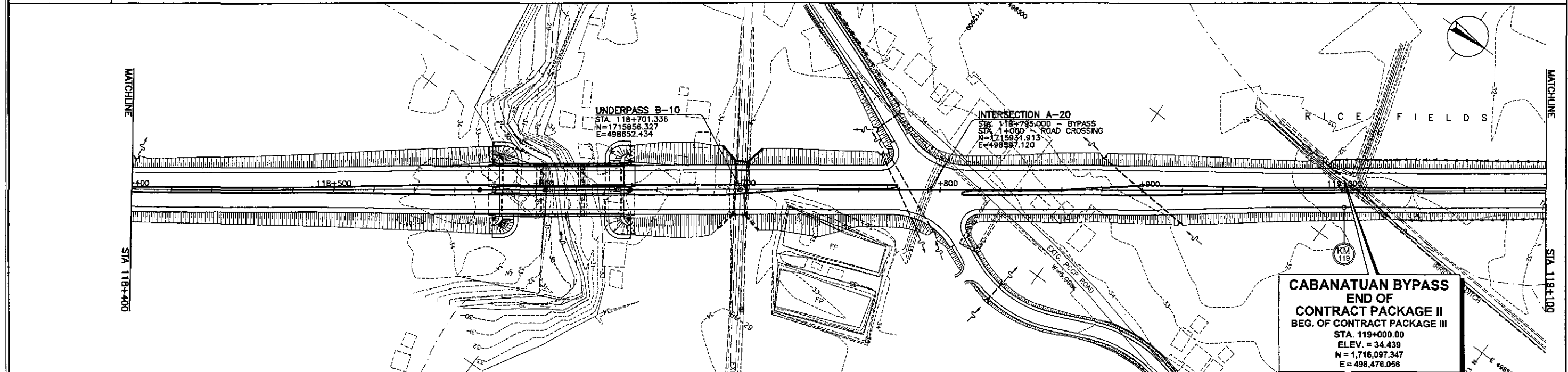
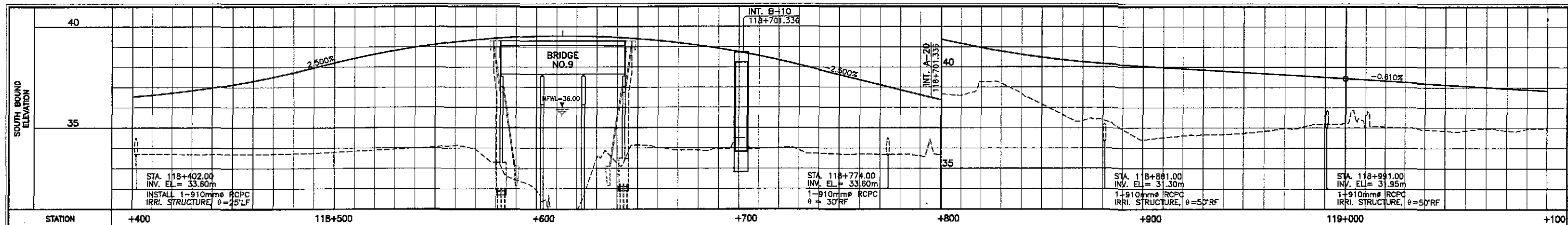
STA. 116+300 - STA. 117+000

SHEET NO.:

DP-11







STATION	+400		118+500				+600		+700		+800		+900		119+000				+100																		
FINISHED GRADE	36.536	36.717	36.976	37.314	37.730	38.212	38.641	38.987	39.244	39.428	39.523	39.536	39.485	39.310	39.073	38.752	38.347	37.865	37.385	36.865	36.380	35.985	35.627	35.363	35.176	35.049	34.927	34.805	34.683	34.561	34.439	34.317	34.195	34.073	33.951	33.829	
TOP LEVEL OF CIM (MC)																																					
INVERT LEVEL OF CROSS PIPE (MC)																																					
TOP LEVEL OF CIM (FR)																																					
INVERT LEVEL OF CROSS PIPE (FR)																																					
INVERT LEVEL OF LONGITUDINAL PIPE (SB)																																					
INVERT LEVEL OF LONGITUDINAL PIPE (NB)																																					

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS
INTERNATIONAL

YEO YACHIYO ENGINEERING CO., LTD.

DESIGNED: 10/09/02 F. S. L. M. A.

CHECKED: 10/16/02 H. S. L. M. A.

SUBMITTED: 10/18/02 M. S. L. M. A.

DATE: 10/09/02

SIGNATURE: F. S. L. M. A.

P.H.L. - PMD

Submitted By: DANILLO C. TRAJANO
Project Director

Reviewed By: JOSEFINA M. ALAGAR
Chief, Highways Division

Recommended By: GILBERTO S. REYES
OIC, Director IV

Approved By: MANUEL M. BONDAN
Undersecretary

Approved By: SIMEON A. DATUMANONG
Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)

CABANATUAN BYPASS - CONTRACT PACKAGE II

SCALE :
HORIZONTAL 1:1000
VERTICAL 1:100
FULL SIZE A1

SHEET CONTENTS :
**SURFACE DRAINAGE
PLAN AND PROFILE**
ALONG BYPASS (ULTIMATE STAGE)
STA. 118+400 - STA. 119+000

SHEET NO. :
DP-14