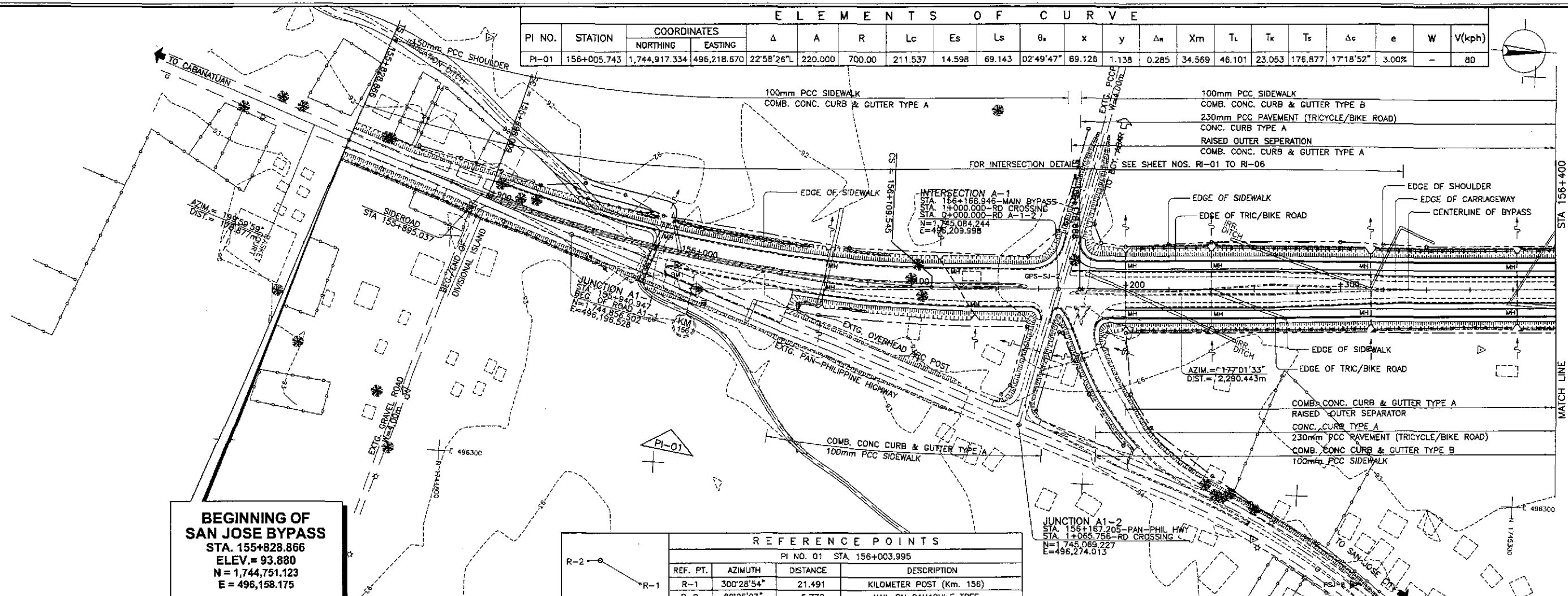
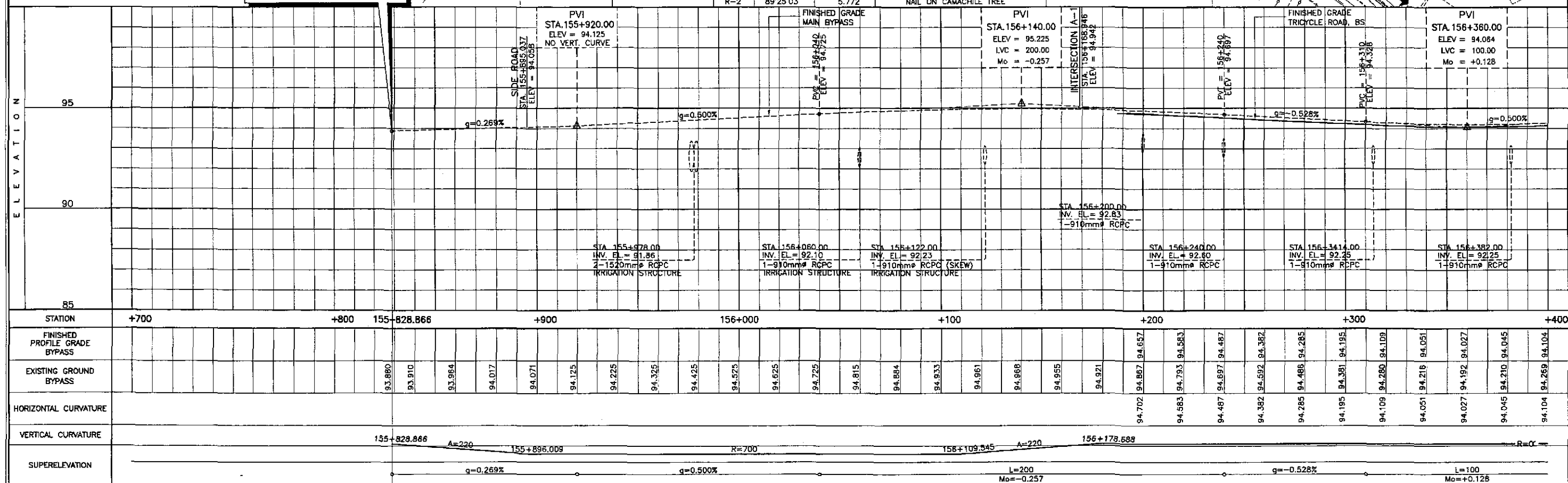


PI NO.	STATION	COORDINATES		Δ	A	R	Lc	Es	Ls	θ _a	x	y	Δ _m	X _m	T _L	T _K	T _S	Δ _c	e	W	V(kph)
		NORTHING	EASTING																		
PI-01	156+005.743	1,744,917.334	496,218.670	22°58'26" L	220.000	700.00	211.537	14.598	69.143	02°49'47"	69.128	1.138	0.285	34.569	46.101	23.053	176.877	17°18'52"	3.00%	-	80

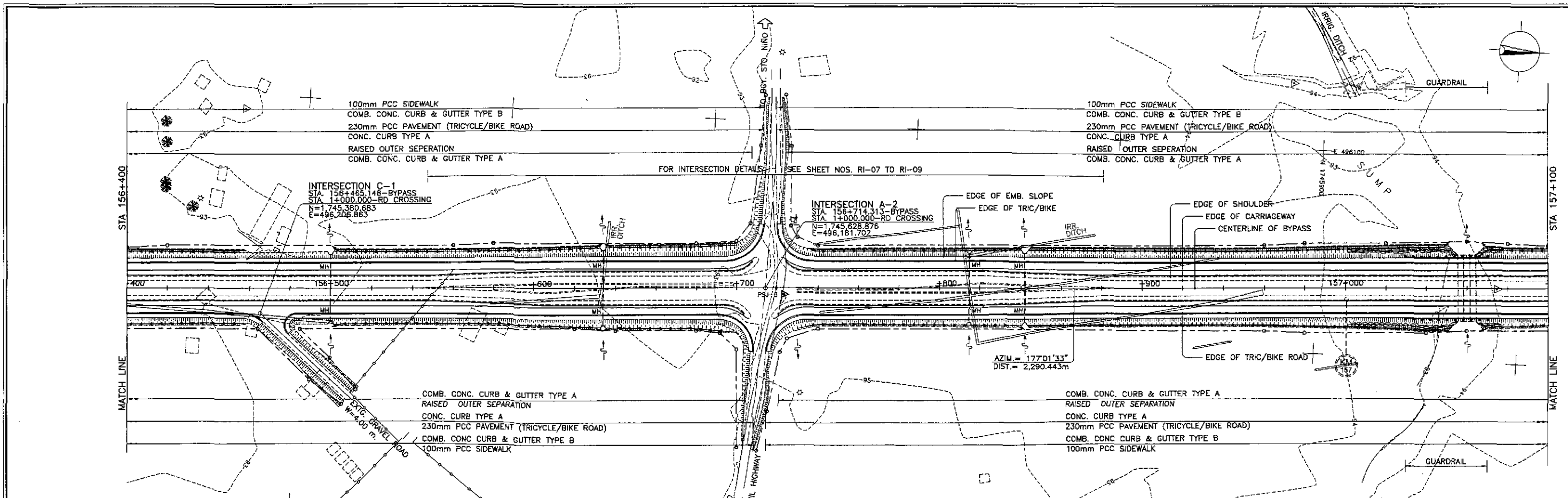


BEGINNING OF SAN JOSE BYPASS
 STA. 155+828.866
 ELEV. = 93.880
 N = 1,744,751.123
 E = 496,158.175

REFERENCE POINTS			
PI NO. 01 STA. 156+003.995			
REF. PT.	AZIMUTH	DISTANCE	DESCRIPTION
R-1	300°28'54"	21.491	KILOMETER POST (Km. 156)
R-2	89°25'03"	5.772	NAIL ON CAMACHILE TREE

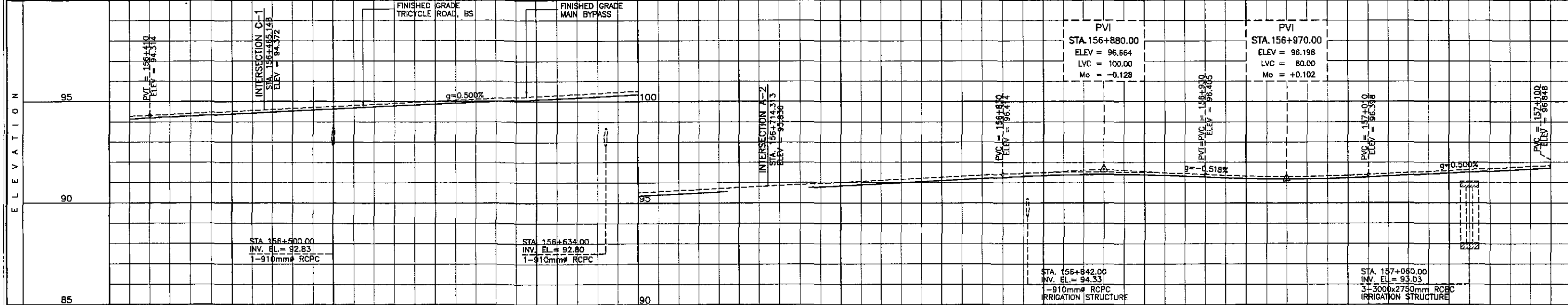


	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS : PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 155+828.866 - STA 156+400	SHEET NO. : RP-01
	CHECKED	9/7/12	[Signature]		DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS						
	SUBMITTED	9/10/12	[Signature]		BUREAU OF DESIGN						
					OFFICE OF THE SECRETARY						
					Submitted By:	Reviewed By:	Recommended By:	Approved By:			
					DANILO C. TRAJANO	JOSEFINA M. ALAGAR	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANGING		
					Project Director	Chief, Highways Division	OC, Director IV	Undersecretary	Secretary		



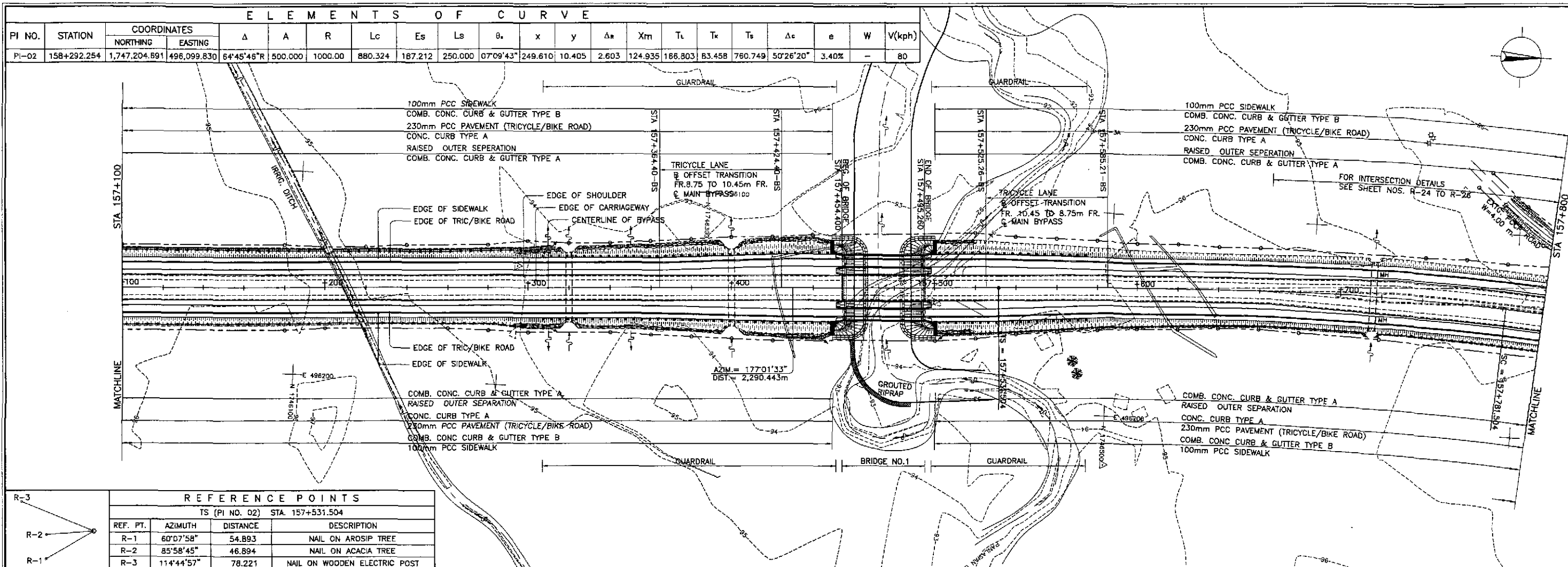
REFERENCE POINTS

REF. FT.	AZIMUTH	DISTANCE	DESCRIPTION
INTERSECTION A-2 STA. 156+714.314			
R-1	177°42'36"	37.007	NAIL ON WOODEN ELECTRIC POST
R-2	81°29'36"	49.149	NAIL ON WOODEN ELECTRIC POST



STATION	+400	156+500										+600	+700										+800	+900										157+000	+100			
FINISHED PROFILE GRADE BYPASS	94.104	94.199	94.289	94.399	94.499	94.599	94.699	94.799	94.890	94.975	95.060	95.154	95.254	95.354	95.454	95.554	95.654	95.754	95.854	95.954	96.054	96.154	96.263	96.337	96.371	96.350	96.287	96.195	96.142	96.140	96.189	96.283	96.383	96.483	96.583	96.683		
EXISTING GROUND BYPASS	94.269	94.364	94.464	94.564	94.664	94.764	94.864	94.964	95.064	95.164	95.264	95.364	95.464	95.564	95.664	95.764	95.864	95.964	96.064	96.164	96.263	96.364	96.459	96.518	96.537	96.515	96.452	96.360	96.307	96.305	96.448	96.548	96.648	96.748	96.848	96.948		
HORIZONTAL CURVATURE	94.104	94.199	94.289	94.399	94.499	94.599	94.699	94.799	94.890	94.975	95.060	95.154	95.254	95.354	95.454	95.554	95.654	95.754	95.854	95.954	96.054	96.154	96.263	96.337	96.371	96.350	96.287	96.195	96.142	96.140	96.189	96.283	96.383	96.483	96.583	96.683		
VERTICAL CURVATURE	R=0																																					
SUPERELEVATION	q=0.500%										L=100 Mo=-0.128										g=-0.518% L=80 Mo=+0.102										q=0.500%							

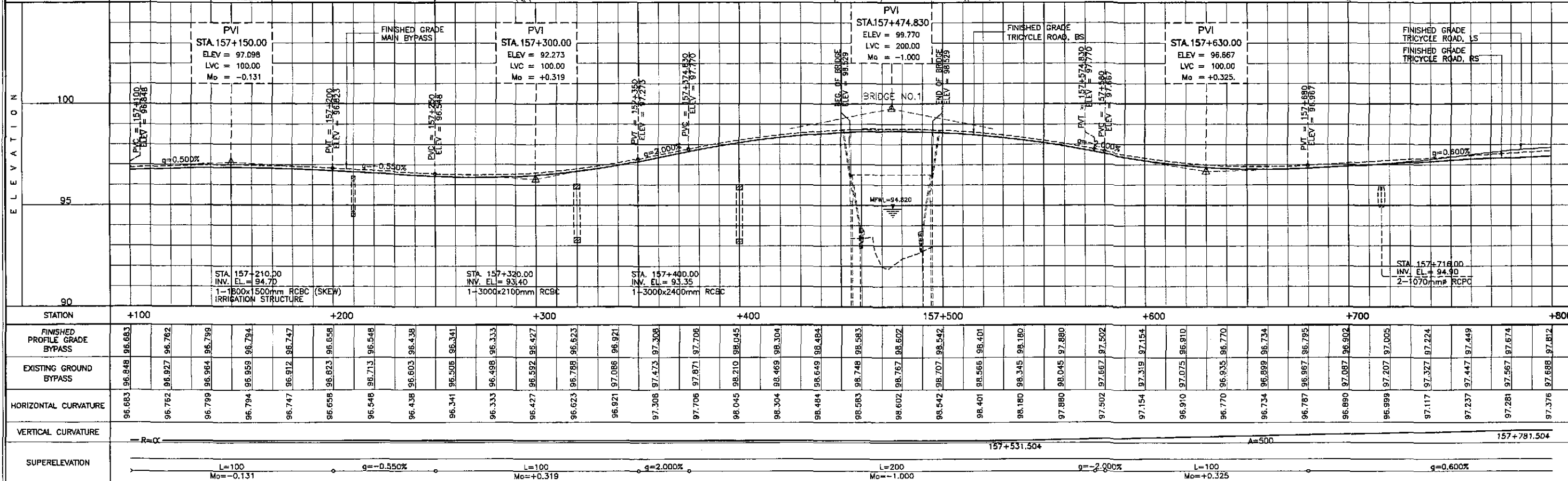
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS					PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :				
	CHECKED	9/19/02	<i>S. Jose</i>		BUREAU OF DESIGN					THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)					HORIZONTAL 1:1000	PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 156+400 - STA. 157+100	RP-02
	SUBMITTED	9/11/02	<i>M. R. R. R.</i>		PJM - PMO	Reviewed By:	Recommended By:	Approved By:	OFFICE OF THE SECRETARY					VERTICAL 1:100			
				DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES O.C. Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary	SAN JOSE BYPASS					FULL SIZE A1			



REFERENCE POINTS

TS (PI NO. 02) STA. 157+531.504

REF. PT.	AZIMUTH	DISTANCE	DESCRIPTION
R-1	60°07'58"	54.893	NAIL ON AROSIP TREE
R-2	85°58'45"	46.894	NAIL ON ACACIA TREE
R-3	114°44'57"	78.221	NAIL ON WOODEN ELECTRIC POST



STATION	+100	+200	+300	+400	+500	+600	+700	+800
FINISHED PROFILE GRADE BYPASS	96.683	96.762	96.799	96.794	96.747	96.658	96.548	96.438
EXISTING GROUND BYPASS	96.848	96.927	96.964	96.959	96.912	96.823	96.713	96.603
HORIZONTAL CURVATURE	96.683	96.762	96.799	96.794	96.747	96.658	96.548	96.438
VERTICAL CURVATURE	-R=0							
SUPERELEVATION	L=100 Mo=-0.131 g=-0.550% L=100 Mo=+0.319 g=2.000% L=200 Mo=-1.000 g=-2.000% L=100 Mo=+0.325 g=0.600%							

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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

OFFICE OF THE SECRETARY

DESIGNED: 9/7/02 <i>[Signature]</i>	CHECKED: 9/9/02 <i>[Signature]</i>	SUBMITTED: 9/10/02 <i>[Signature]</i>
PROJECT DIRECTOR: DANILO C. TRAJANO	CHIEF, HIGHWAYS DIVISION: JOSEFINA M. ALAGAR	OIC, DIRECTOR IV: GILBERTO S. REYES
RECOMMENDED BY: MANUEL M. BONDAN	UNDERSECRETARY: SIMEON A. DATUMANONG	SECRETARY: SIMEON A. DATUMANONG

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

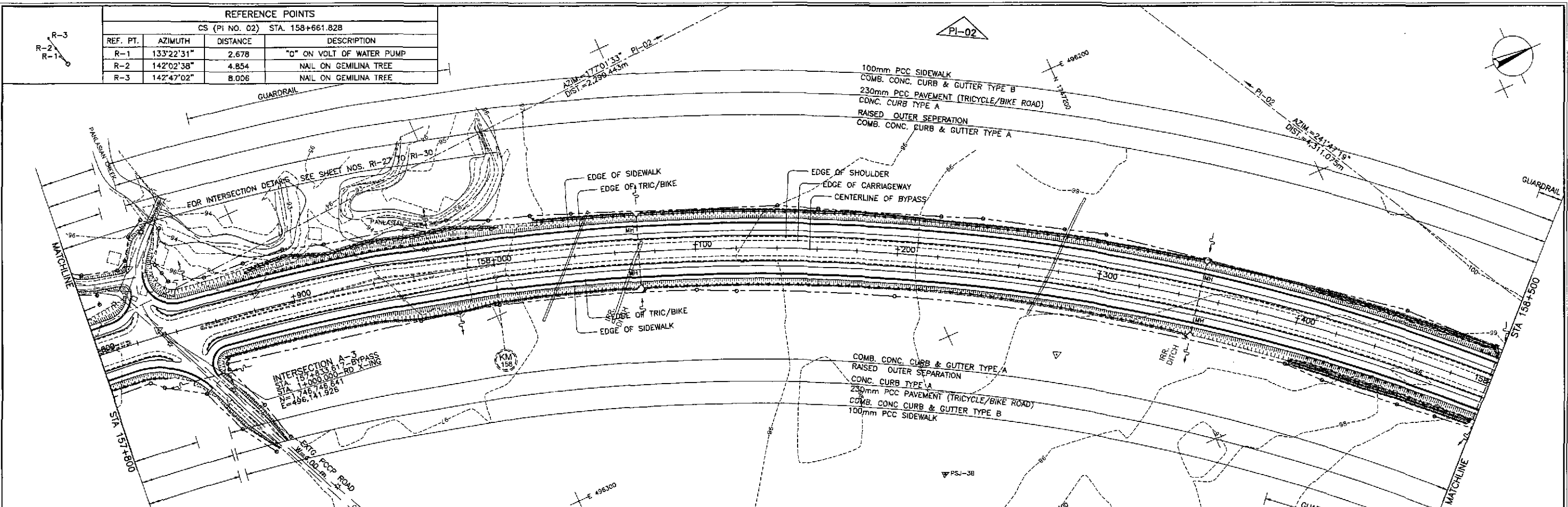
SAN JOSE BYPASS

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

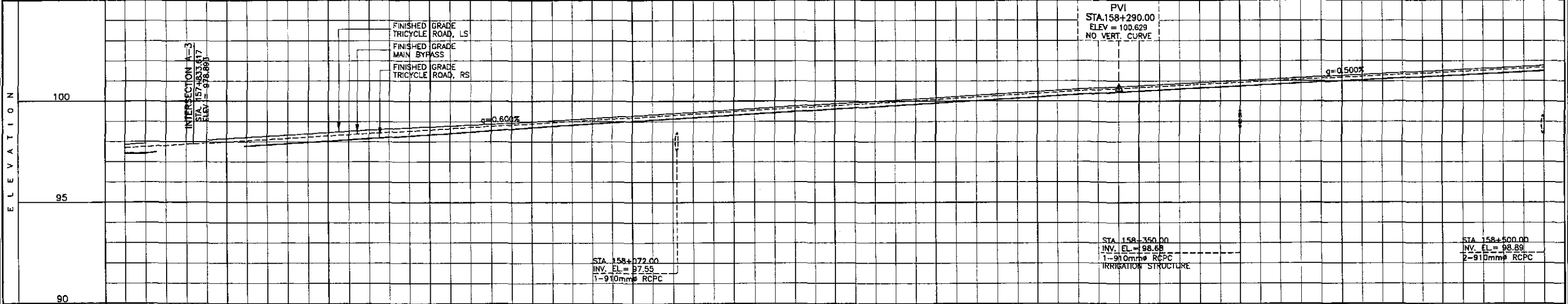
SHEET CONTENTS: PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 157+100 - STA. 157+800

SHEET NO.: **RP-03**

REFERENCE POINTS			
CS (PI NO. 02) STA. 158+661.828			
REF. PT.	AZIMUTH	DISTANCE	DESCRIPTION
R-1	133°22'31"	2.678	"0" ON VOLT OF WATER PUMP
R-2	142°02'38"	4.854	NAIL ON GEMILINA TREE
R-3	142°47'02"	8.006	NAIL ON GEMILINA TREE



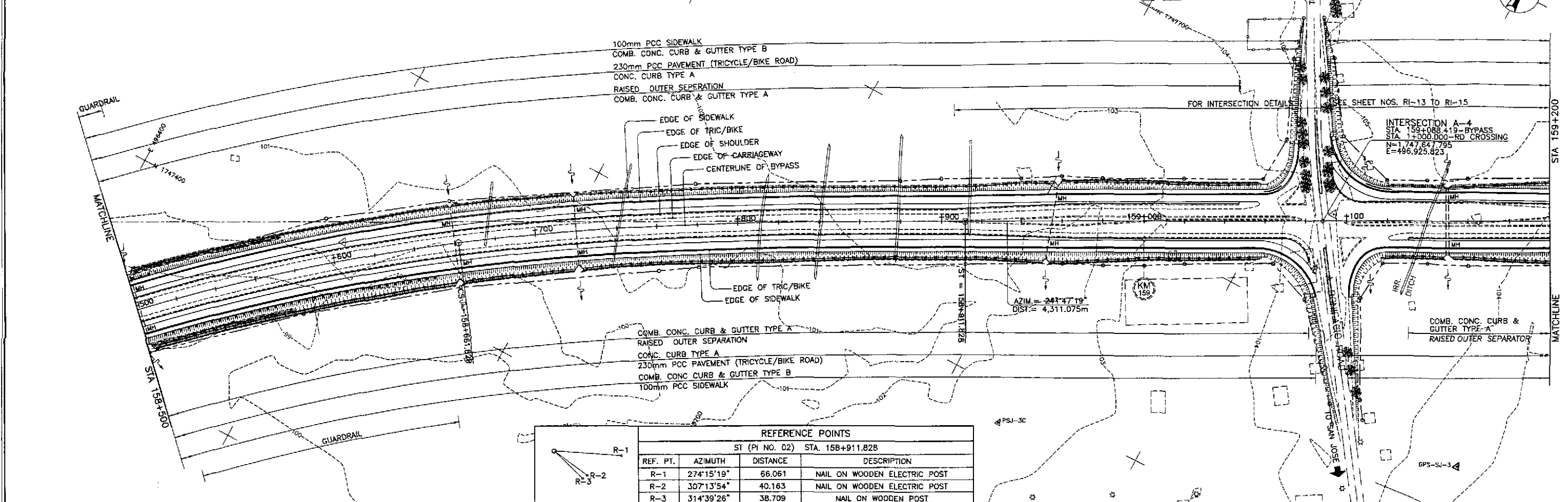
ELEMENTS OF CURVE																					
PI NO.	STATION	COORDINATES		Δ	A	R	Lc	Es	Ls	θ _s	x	y	Δ _r	X _m	T _L	T _K	T _S	Δ _c	e	W	V(kph)
		NORTHING	EASTING																		
PI-02	158+292.254	1,747,204.691	496,099.830	64°45'46"R	500.000	1000.00	880.324	187.212	250.000	07°09'43"	249.610	10.405	2.603	124.935	166.803	83.458	760.749	50°26'20"	3.40%	-	80



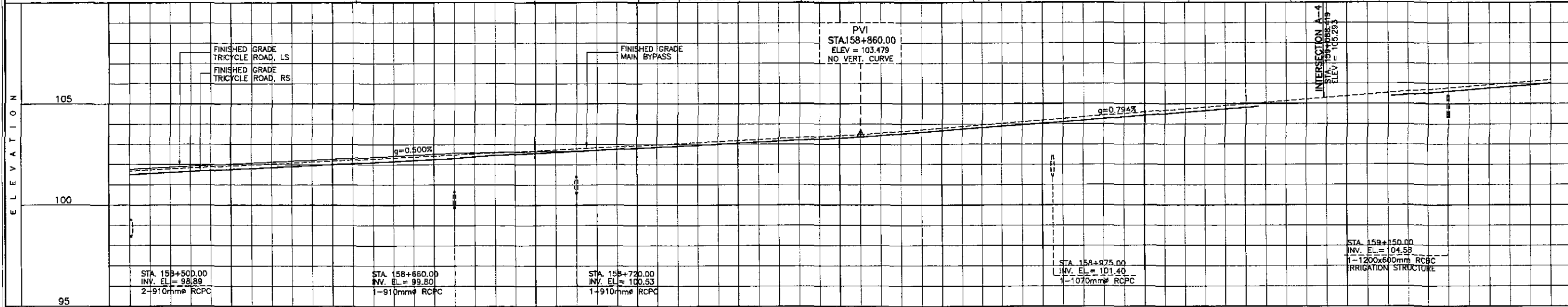
STATION	+800	+900	158+000	+100	+200	+300	+400	158+500
FINISHED PROFILE GRADE BYPASS	97.812	98.172	98.292	98.412	98.532	98.652	98.772	98.892
EXISTING GROUND BYPASS	97.888	97.808	97.928	98.048	98.168	98.288	98.408	98.528
HORIZONTAL CURVATURE	97.376	97.736	97.856	97.976	98.096	98.216	98.336	98.456
VERTICAL CURVATURE	R=1000							
SUPERELEVATION	g=0.600%				g=0.500%			

	DESIGNED: 9/12/02 CHECKED: 9/19/02 SUBMITTED: 9/19/02	SIGNATURE: [Signature] NAME: ACACIO POSITION: TEAM LEADER		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) SAN JOSE BYPASS	SCALE: HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS: PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 157+800 - STA. 158+500	SHEET NO.: RP-04		
	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. BONGAN, Undersecretary		Approved By: SIMEON A. DATUMANONG, Secretary	
	JICA JAPAN INTERNATIONAL COOPERATION AGENCY		KATAHIRA & ENGINEERS INTERNATIONAL		YEO YACHIYO ENGINEERING CO., LTD.		PROJECT AND LOCATION: THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)		SHEET NO.: RP-04	

ELEMENTS OF CURVE																					
PI NO.	STATION	COORDINATES		Δ	A	R	Lc	Es	Ls	θs	x	y	Δm	Xm	Tc	Ts	Ts	Δc	e	W	V(kph)
		NORTHING	EASTING																		
PI-02	158+292.254	1,747,204.691	496,099.830	64°45'46"R	500.000	1000.00	880.324	187.212	250.000	07°09'43"	249.610	10.405	2.603	124.935	166.803	83.458	760.749	50°26'20"	3.40%	-	B0

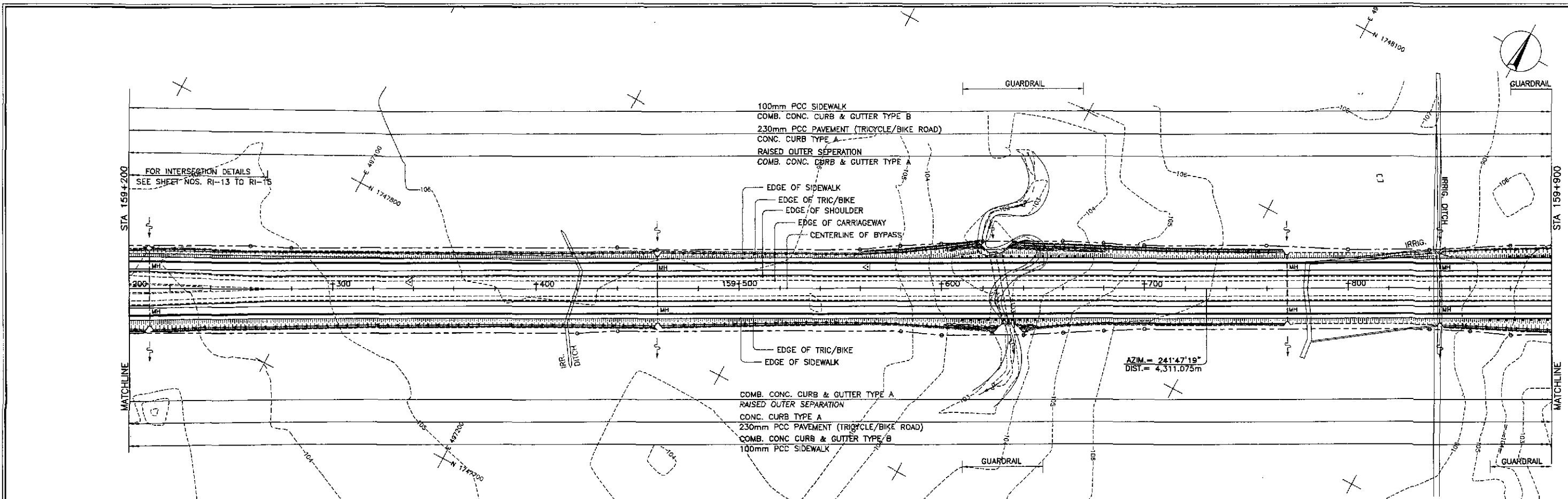


REFERENCE POINTS			
ST (PI NO. 02) STA. 158+911.828			
REF. PT.	AZIMUTH	DISTANCE	DESCRIPTION
R-1	274°15'19"	66.061	NAIL ON WOODEN ELECTRIC POST
R-2	307°13'54"	40.163	NAIL ON WOODEN ELECTRIC POST
R-3	314°39'26"	38.709	NAIL ON WOODEN POST

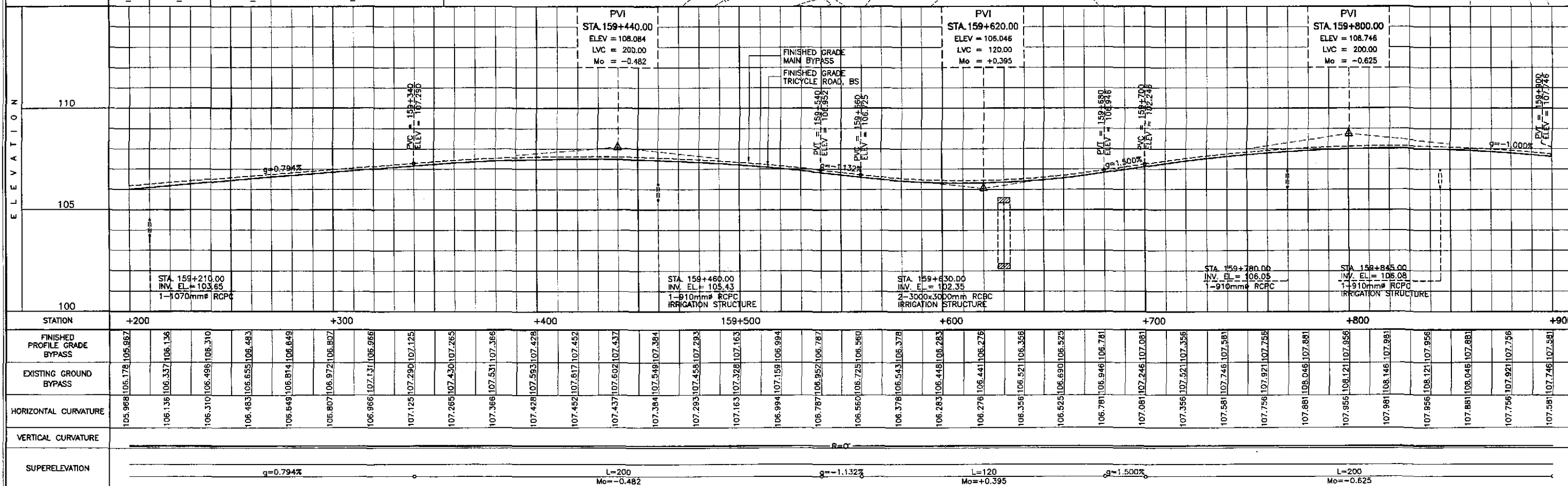


STATION	158+500	+600	+700	+800	+900	159+000	+100	+200	
FINISHED PROFILE GRADE BYPASS	101.443	101.679	101.726	101.826	101.926	102.026	102.126	102.226	
EXISTING GROUND BYPASS	101.543	101.779	101.826	101.926	102.026	102.126	102.226	102.326	
HORIZONTAL CURVATURE	101.443	101.543	101.643	101.743	101.843	101.943	102.043	102.143	
VERTICAL CURVATURE	R=1000				A=500				R=∞
SUPERELEVATION	g=0.500%				g=0.794%				

	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	SCALE : HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS : PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 158+500 - STA. 159+200	SHEET NO. : RP-05
	CHECKED	9/9/02	<i>S. Acacio</i>		DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS						
	SUBMITTED	9/11/02	<i>M. R. R. R.</i>		BUREAU OF DESIGN						
Submitted By:		Reviewed By:		Recommended By:		Approved By:					
DANILO C. TRAJANO Project Director		JOSEFINA M. ALAGAR Chief, Highways Division		GILBERTO S. REYES Dir., Director IV		MANUEL M. BONDAN Undersecretary		SIMEON A. DATUMANONG Secretary			



REFERENCE POINTS			
STA. 159+500.000			
REF. PT.	AZIMUTH	DISTANCE	DESCRIPTION
PS128	166°51'06"	12.077	EMBEDDED CONC. MONUMENT



STATION	+200	+300	+400	159+500	+600	+700	+800	+900
FINISHED PROFILE GRADE BYPASS	105.967	106.310	106.649	107.428	108.276	109.124	109.972	107.581
EXISTING GROUND BYPASS	106.178	106.498	106.814	107.593	108.441	109.289	108.121	107.746
HORIZONTAL CURVATURE	105.968	106.136	106.483	107.452	108.276	109.124	109.972	107.581
VERTICAL CURVATURE	R=C							
SUPERELEVATION	g=0.794%		L=200, Mo=-0.482		g=-1.132%		L=200, Mo=-0.625	

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DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

BUREAU OF DESIGN
OFFICE OF THE SECRETARY

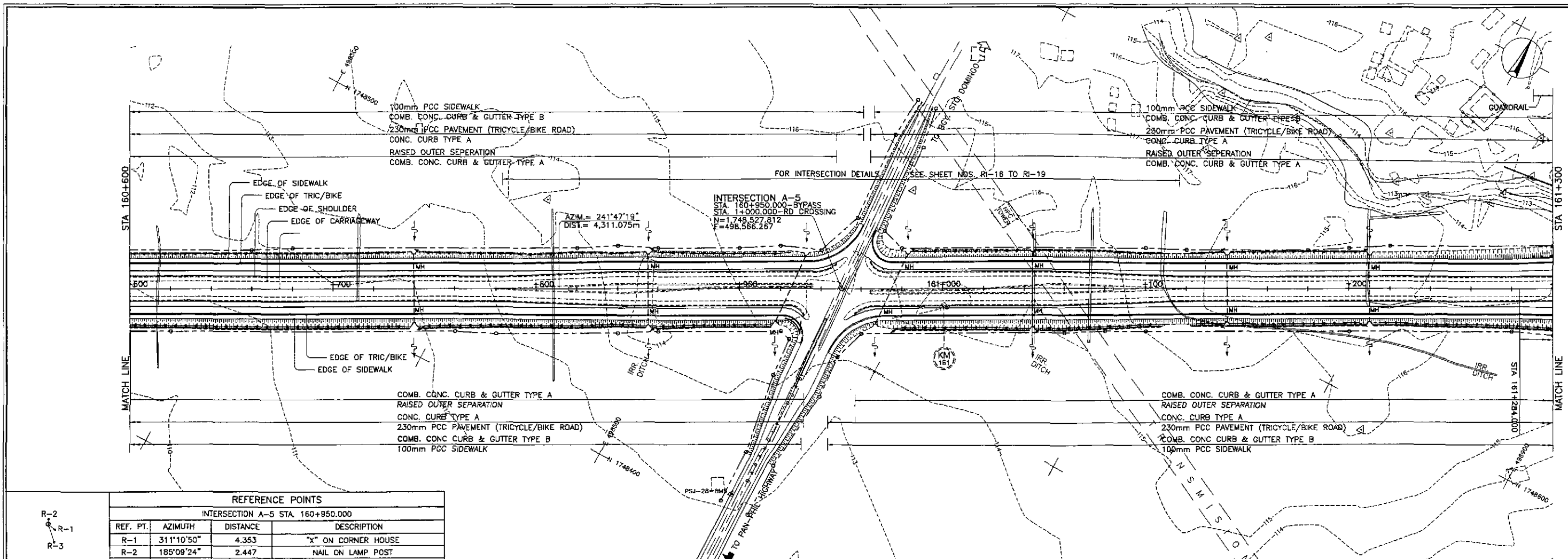
Submitted By: DANILLO C. TRAJANO, Project Director
Reviewed By: JOSEFINA M. ALACAR, Chief, Highways Division
Recommended By: GILBERTO S. REYES, OIC, Director IV
Approved By: MANUEL M. BONDAN, Undersecretary
SIMEON A. DATUMANONG, Secretary

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

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

SHEET CONTENTS :
PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 159+200 - STA. 159+900

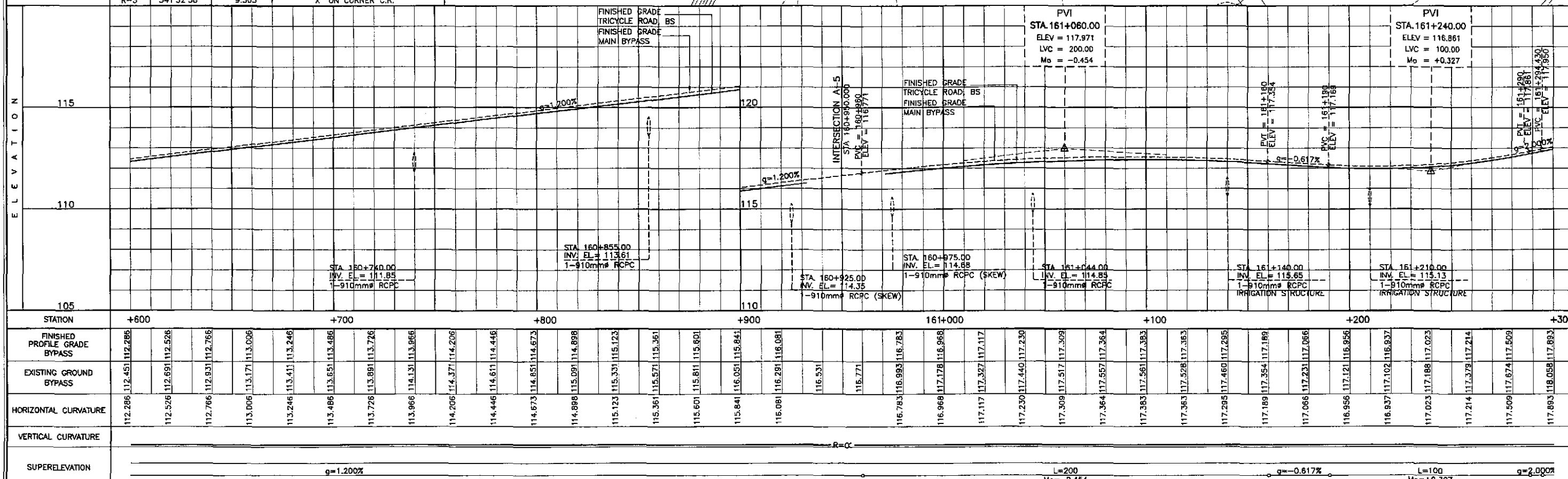
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RP-06



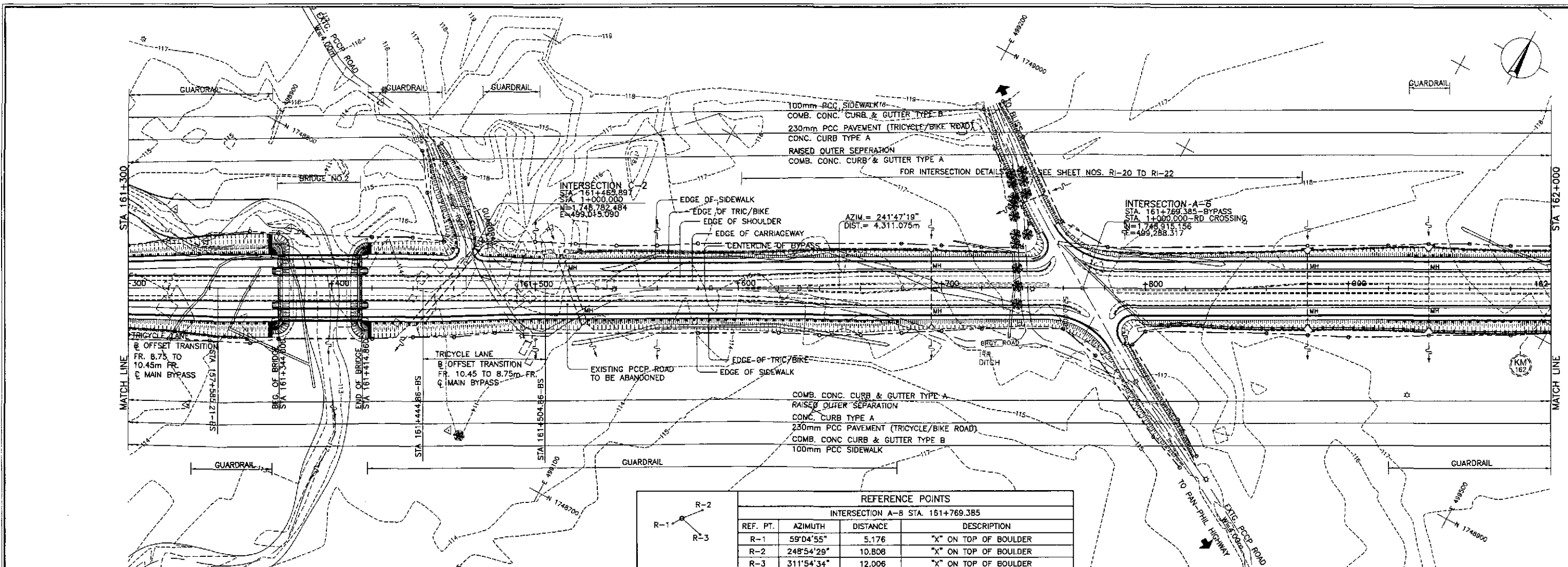
REFERENCE POINTS

INTERSECTION A-5 STA. 160+950.000

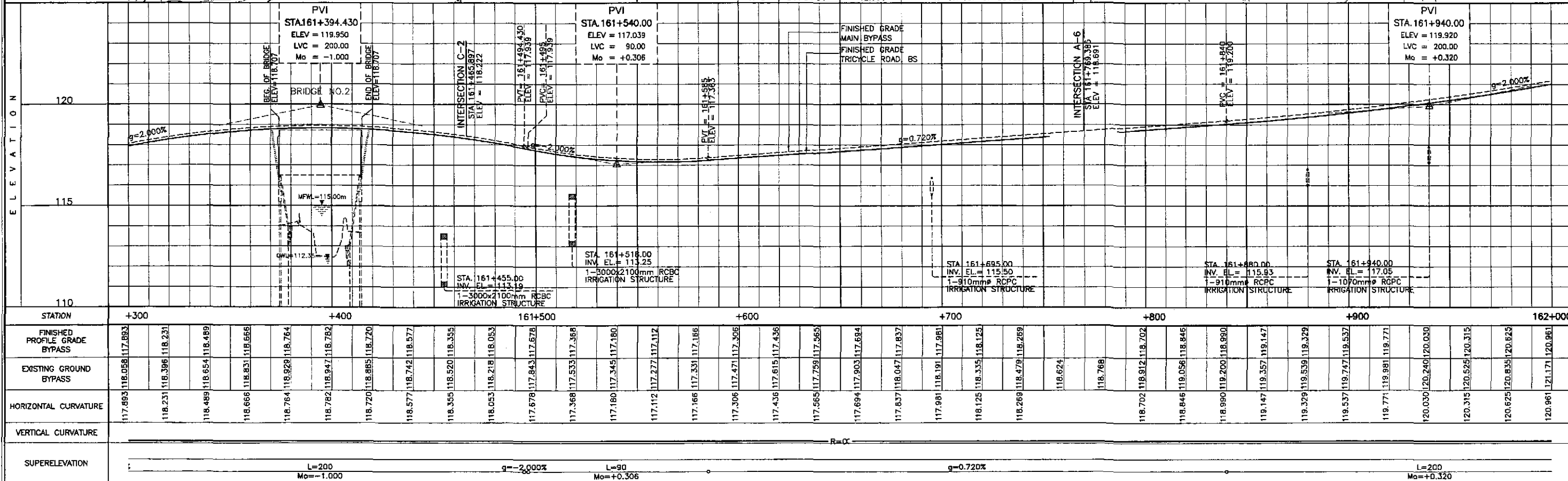
REF. PT.	AZIMUTH	DISTANCE	DESCRIPTION
R-1	311°10'50"	4.353	"X" ON CORNER HOUSE
R-2	185°09'24"	2.447	NAIL ON LAMP POST
R-3	341°32'58"	9.305	"X" ON CORNER C.R.



	DESIGNED: <i>[Signature]</i> CHECKED: <i>[Signature]</i> SUBMITTED: <i>[Signature]</i>	DATE: 9/7/02 DATE: 9/9/02 DATE: 9/11/02		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN	PROJECT AND LOCATION: THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pardid, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	SCALE: HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	SHEET CONTENTS: PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 160+600 - STA. 161+300	SHEET NO.: RP-08		
	SUBMITTED BY: DANILLO C. TRAJANO, Project Director				REVIEWED BY: JOSEFINA M. ALAGAR, Chief, Highways Division				APPROVED BY: GILBERTO S. REYES, OIC, Director IV	
	SUBMITTED BY: MANUEL M. BONDAN, Undersecretary				REVIEWED BY: SIMEON A. DATUMANONG, Secretary				APPROVED BY: SIMEON A. DATUMANONG, Secretary	

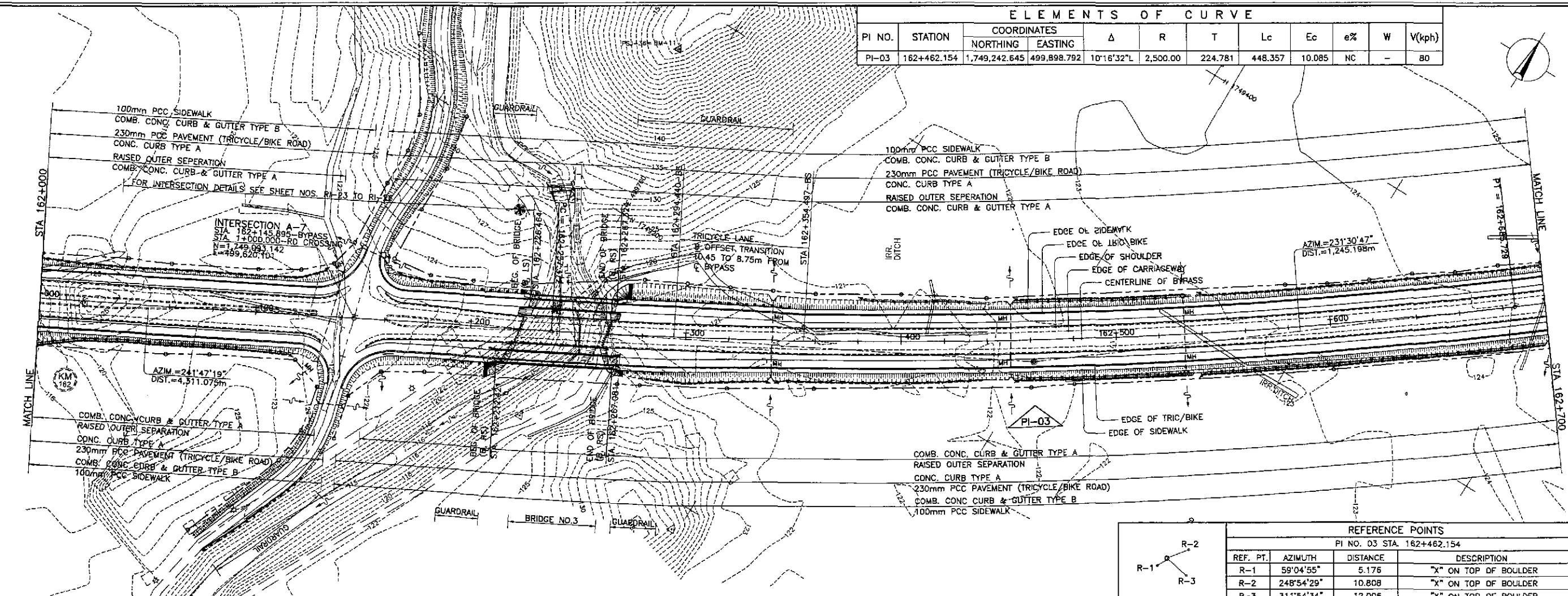


REFERENCE POINTS			
INTERSECTION A-6 STA. 161+769.385			
REF. PT.	AZIMUTH	DISTANCE	DESCRIPTION
R-1	59°04'55"	5.176	"X" ON TOP OF BOULDER
R-2	248°54'29"	10.808	"X" ON TOP OF BOULDER
R-3	311°54'34"	12.006	"X" ON TOP OF BOULDER

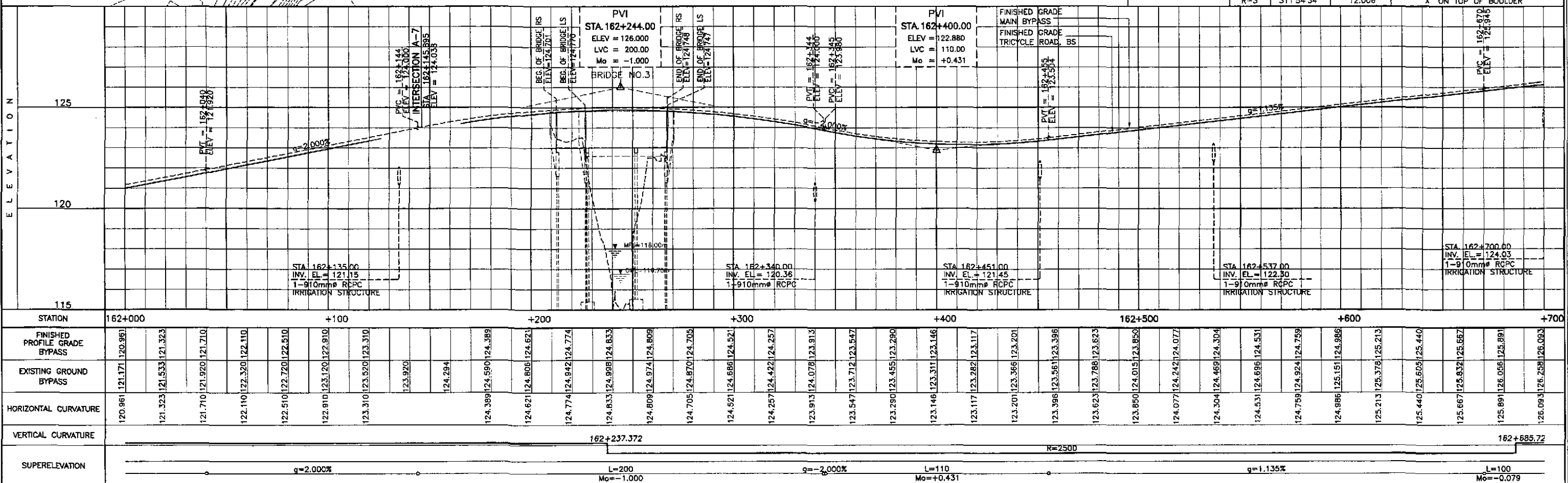


	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	9/7/02	<i>[Signature]</i>	BUREAU OF DESIGN			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Paridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 161+300 - STA. 162+000	RP-09
	CHECKED	9/9/02	<i>[Signature]</i>	OFFICE OF THE SECRETARY						
	SUBMITTED	9/11/02	<i>[Signature]</i>	Approved By: <i>[Signature]</i> (See cover sheet for Signature/Approvals) SIMON A. DATUMANANG Secretary						
Submitted By: DANILO C. TRAJANO Project Director Reviewed By: JOSEFINA M. ALAGAR Chief, Highway Division Recommended By: GILBERTO S. REYES D.C. Director IV Recommended By: MANUEL M. BONGAN Undersecretary										

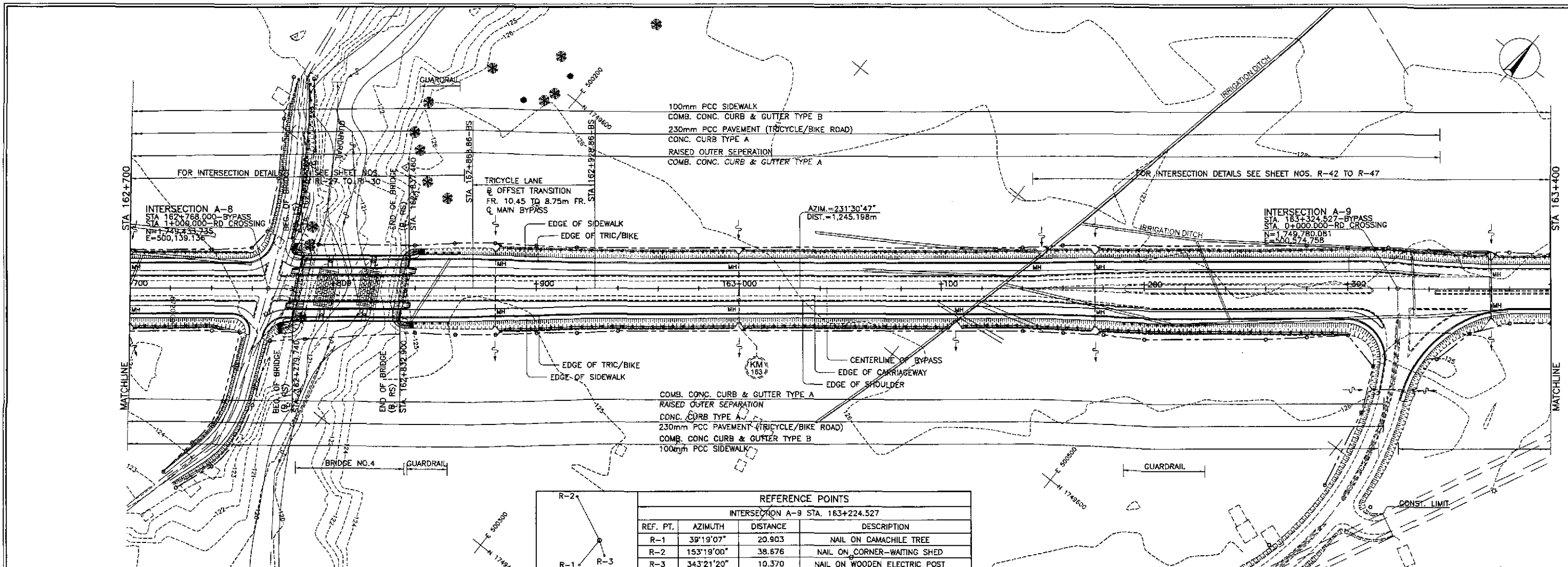
PI NO.	STATION	COORDINATES		Δ	R	T	Lc	Ec	e%	W	V(kph)
		NORTHING	EASTING								
PI-03	162+462.154	1,749,242.645	499,898.792	10°16'32"L	2,500.00	224.781	448.357	10.085	NC	-	80



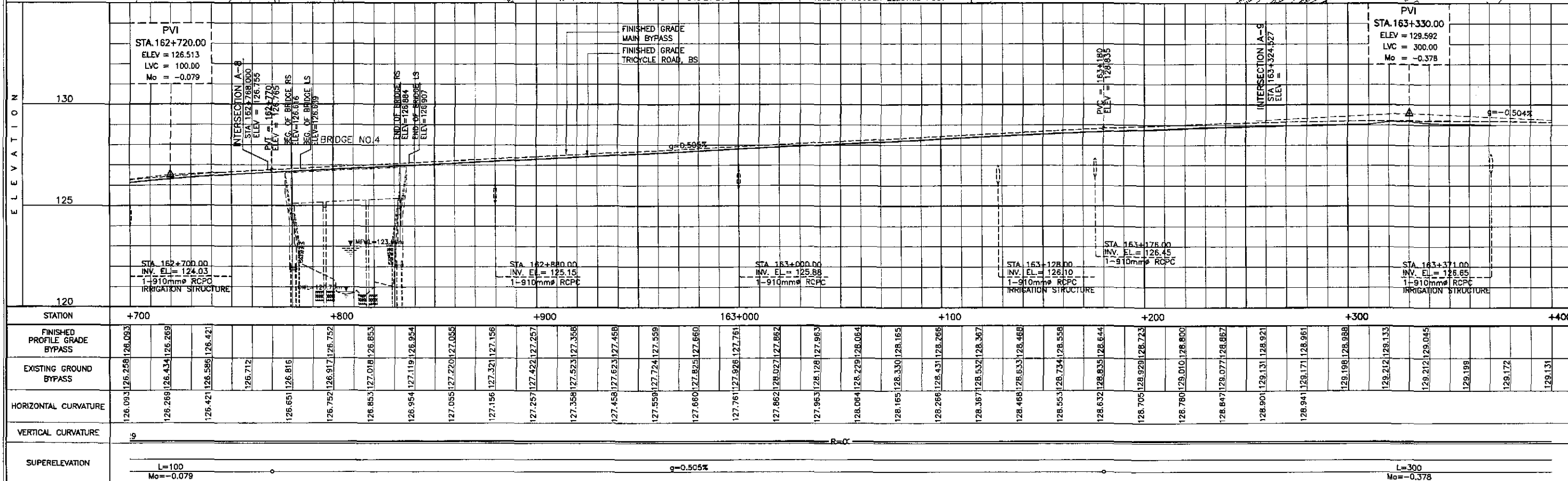
REFERENCE POINTS			
PI NO. 03 STA. 162+462.154			
REF. PT.	AZIMUTH	DISTANCE	DESCRIPTION
R-1	59°04'55"	5.176	"X" ON TOP OF BOULDER
R-2	248°54'29"	10.808	"X" ON TOP OF BOULDER
R-3	311°54'34"	12.006	"X" ON TOP OF BOULDER



	DESIGNED: 9/7/02 CHECKED: 9/9/02 SUBMITTED: 9/11/02	DATE: 9/7/02 SIGNATURE: [Signature] NAME: MCACIO TITLE: ENGINEER	P.J.H. - P.W.O. Submitted By: DANILLO C. TRAJANO Project Director	BUREAU OF DESIGN Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division	OFFICE OF THE SECRETARY Recommended By: GILBERTO S. REYES OIC, Director IV	Recommended 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) SAN JOSE BYPASS	SCALE: HORIZONTAL: 1:1000 VERTICAL: 1:100 FULL SIZE A1	SHEET CONTENTS: PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 162+000 - STA. 162+700	SHEET NO.: RP-10	
	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS								PROJECT AND LOCATION:	SCALE:	SHEET CONTENTS:	SHEET NO.:
	JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YEC YACHIYO ENGINEERING CO., LTD.								THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	HORIZONTAL: 1:1000 VERTICAL: 1:100 FULL SIZE A1	PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 162+000 - STA. 162+700	RP-10



REFERENCE POINTS			
INTERSECTION A-9 STA. 163+224.527			
REF. PT.	AZIMUTH	DISTANCE	DESCRIPTION
R-1	39°19'07"	20.903	NAIL ON CAMACHILE TREE
R-2	153°19'00"	38.676	NAIL ON CORNER-WAITING SHED
R-3	343°21'20"	10.370	NAIL ON WOODEN ELECTRIC POST



STATION	+700	+800	+900	163+000	+100	+200	+300	+400
FINISHED PROFILE GRADE BYPASS	126.093	126.258	126.421	126.586	126.712	126.853	126.954	127.055
EXISTING GROUND BYPASS	126.258	126.434	126.586	126.712	126.853	126.954	127.055	127.156
HORIZONTAL CURVATURE	126.093	126.258	126.421	126.586	126.712	126.853	126.954	127.055
VERTICAL CURVATURE	g							
SUPERELEVATION	L=100 Mo=-0.079							

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KEI KATAHIRA & ENGINEERS INTERNATIONAL
YEC YACHIYO ENGINEERING CO., LTD.

REPUBLIC OF THE PHILIPPINES
 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

DESIGNED: 9/7/02	CHECKED: 9/7/02	SUBMITTED: 9/11/02	DATE: 9/7/02	SIGNATURE: [Signature]
Submitted By: DANILLO C. TRAJANO, Project Director		Reviewed By: JOSEFINA M. ALAGAR, Chief, Highways Division		Recommended By: GILBERTO S. REYES, Dir. Director IV
Office of the Secretary: SIMEDON A. DATUMANONG, Secretary		Office of the Secretary: SIMEDON A. DATUMANONG, Secretary		Office of the Secretary: SIMEDON 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)

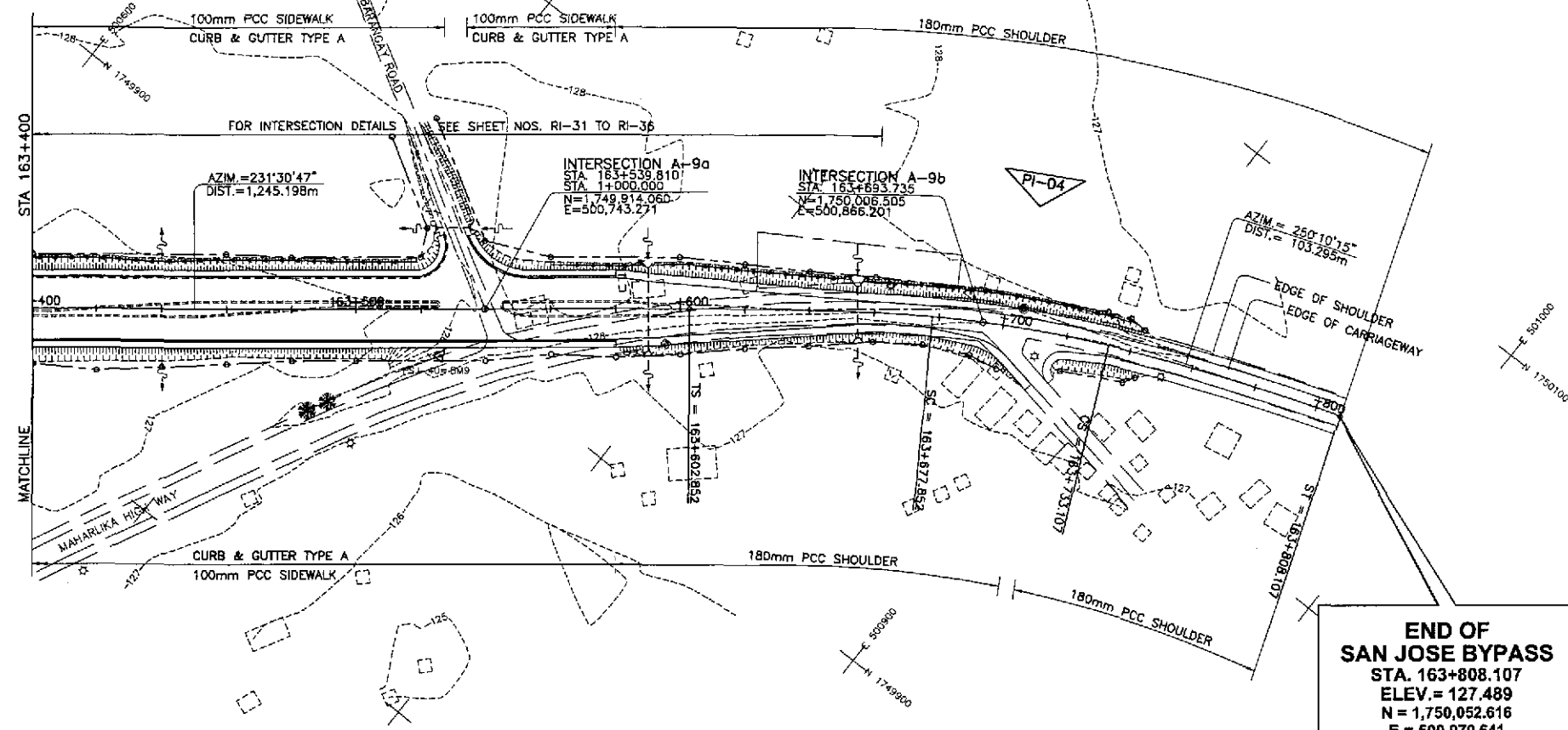
SAN JOSE BYPASS

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

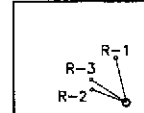
SHEET CONTENTS:
 PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 162+700 - STA. 163+400

SHEET NO.: **RP-11**

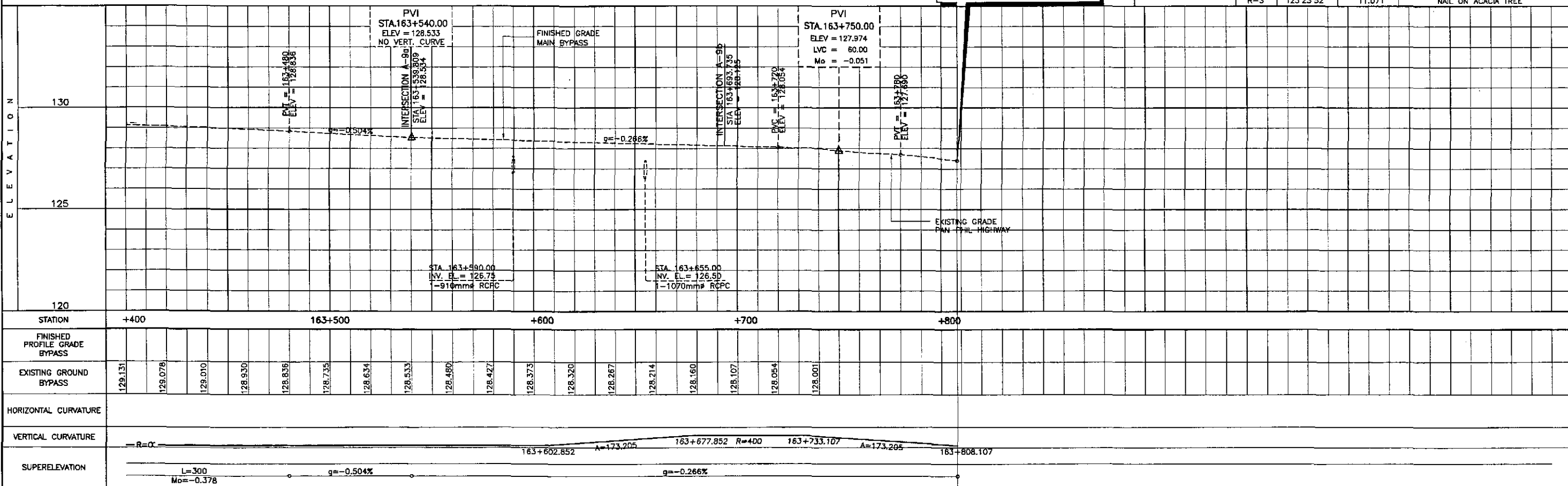
ELEMENTS OF CURVE																					
PI NO.	STATION	COORDINATES		Δ	A	R	Lc	Es	Ls	θ_c	x	y	Δx	Xm	T ₁	T ₂	T ₃	Δc	e	W	V(kph)
		NORTHING	EASTING																		
PI-04	163+706.146	1,750,017.577	500,873.471	18°39'28"R	173.205	400.00	55.255	5.995	75.000	05°22'17"	74.934	2,342	0.586	37.489	50.023	25.021	103.295	07°54'53"	2.50%	-	80



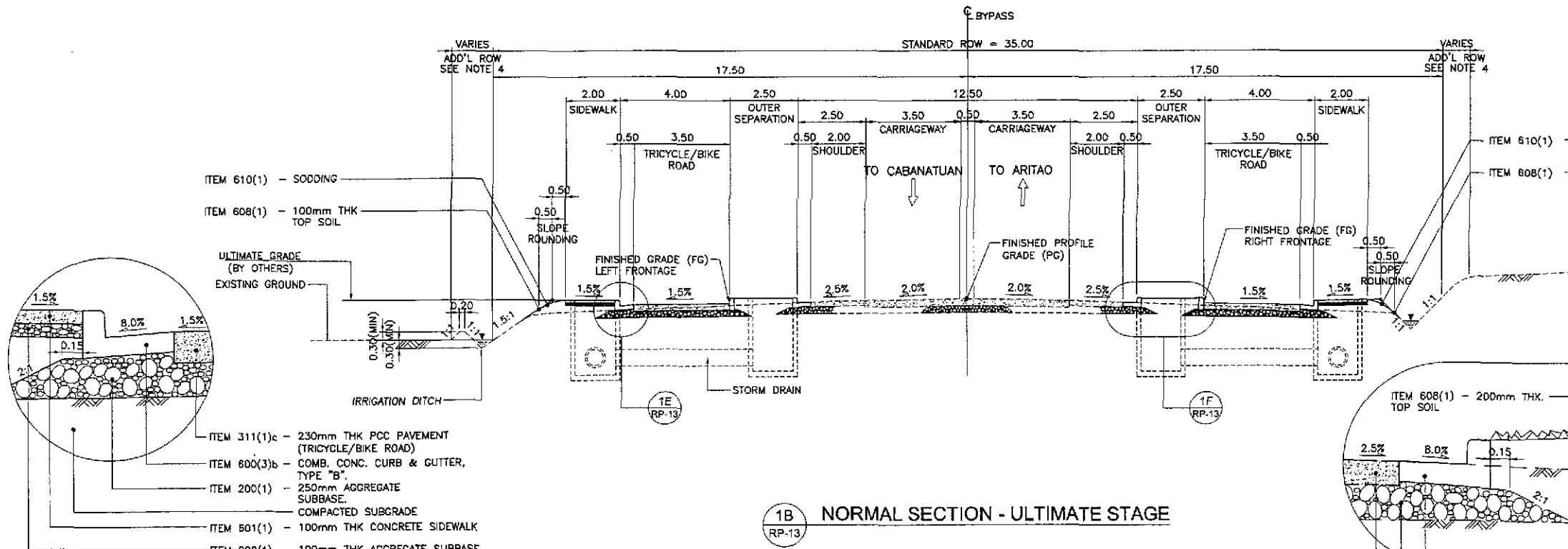
END OF SAN JOSE BYPASS
 STA. 163+808.107
 ELEV. = 127.489
 N = 1,750,052.616
 E = 500,970.641



REFERENCE POINTS			
PI NO. 04 STA. 163+706.148			
REF. PT.	AZIMUTH	DIST.	DESCRIPTION
R-1	166°51'06"	12.077	NAIL ON WOODEN ELECTRIC POST
R-2	110°55'34"	9.587	"X" ON CORNER CHB
R-3	123°23'52"	11.071	NAIL ON ACACIA TREE

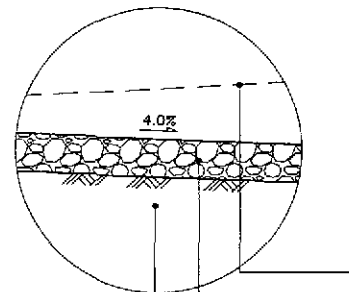


	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	9/6/02	[Signature]	BUREAU OF DESIGN				THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	HORIZONTAL 1:1000 VERTICAL 1:100 FULL SIZE A1	PLAN AND PROFILE ALONG BYPASS (ULTIMATE STAGE) STA. 163+400 - STA. 163+808.17	RP-12
	CHECKED	9/9/02	[Signature]	Submitted By:	Reviewed By:	Recommended By:	Office of the Secretary				
SUBMITTED	9/11/02	[Signature]	DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMNONG Secretary				

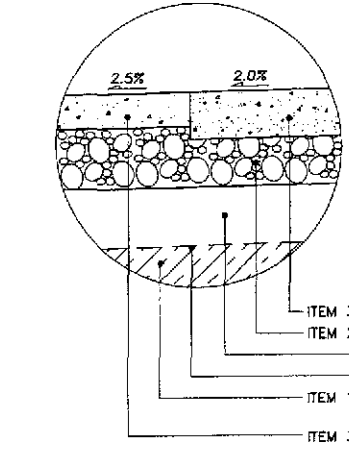


- NOTES:**
1. FINISHED PROFILE GRADE (PG) ALONG BYPASS IS TAKEN FROM THE CENTERLINE WHEREAS FINISHED GRADE (FG) IS RECKONED FROM THE PROFILE GRADE RELATIVE TO THE PAVEMENT CROSS SLOPE.
 2. FOR SCHEDULE OF QUANTITIES, SEE SHEET NO. RG-04 TO RG-10.
 3. ROADWAY SECTIONS OTHER THAN THE STANDARD WIDTH SHALL BE VARIED DUE TO HORIZONTAL TRANSITION OF SERVICE ROAD/ OR FRONTAGE ROAD, MEDIAN DIMENSIONAL ISLANDS, OUTER SEPARATION AND DUE TO HEIGHT OF EMBANKMENT.
 4. R.O.W. WIDTH OTHER THAN THE STANDARD WIDTH VARIES IN ACCORDANCE WITH NOTE 3.
 5. SIDESLOPES OF 1:5:1 OR FLATTER SHALL BE PROTECTED BY SODDING. SIDESLOPES ALONG AREAS PRONE TO FLOODING SHALL BE PROTECTED BY GROUDED RIPRAP AT 300mm MINIMUM THICKNESS. SIDESLOPES ALONG BUILT-UP AREAS SHALL BE PROTECTED BY STONE MASONRY AND/ OR RETAINING WALLS OR AS DIRECTED BY THE ENGINEER.
 6. SEE SHEET NO. RG-07 FOR UNSUITABLE EXCAVATION SCHEDULE.

1E DETAIL
RP-13 SCALE 1:20



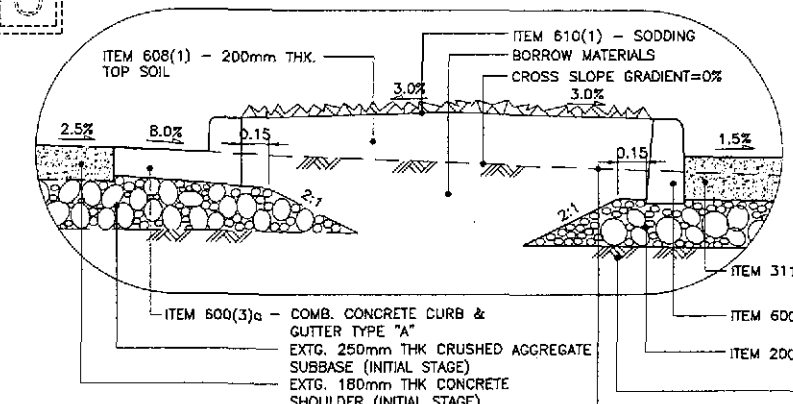
1Da DETAIL
RP-13 SCALE 1:20



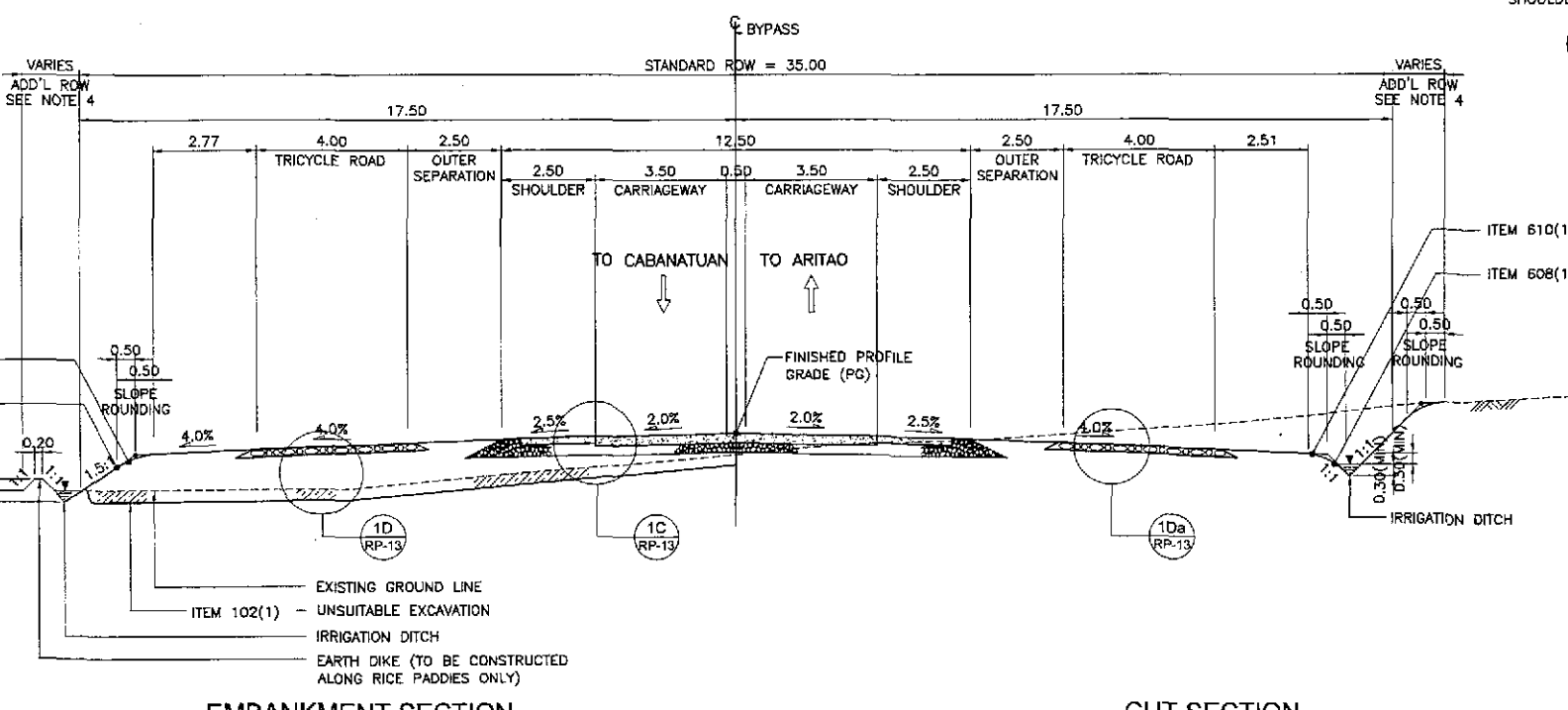
- EXISTING GROUND (BY OTHERS)
EXISTING GROUND
IRRIGATION DITCH
FINISHED GRADE (FG) LEFT FRONTAGE
FINISHED PROFILE GRADE (PG)
FINISHED GRADE (FG) RIGHT FRONTAGE
ITEM 311(1)c - 230mm THK PCC PAVEMENT (TRICYCLE/BIKE ROAD)
ITEM 600(3)b - COMB. CONC. CURB & GUTTER, TYPE "B"
ITEM 200(1) - 250mm AGGREGATE SUBBASE
ITEM 501(1) - 100mm THK CONCRETE SIDEWALK
ITEM 200(1) - 100mm THK AGGREGATE SUBBASE
- ITEM 311(1)c - 230mm THK PCC PAVEMENT (TRICYCLE/BIKE ROAD)
ITEM 600(3)a - COMB. CONCRETE CURB & GUTTER TYPE "A"
EXTG. 250mm THK CRUSHED AGGREGATE SUBBASE (INITIAL STAGE)
EXTG. 180mm THK CONCRETE SHOULDER (INITIAL STAGE)
ITEM 510(1) - SODDING
ITEM 608(1) - 100mm THK TOP SOIL
ITEM 311(1)c - 230mm THK PCC PAVEMENT (TRICYCLE/BIKE ROAD)
ITEM 600(1)a - CONCRETE CURB ONLY (TYPE "A")
ITEM 200(1) - 250mm THK CRUSHED AGGREGATE SUBBASE
COMPACTED SUBGRADE
INITIAL STAGE GRADE LINE
- EXISTING GROUND LINE (CLT SECTION)
ITEM 300(1) - 150mm THK GRAVEL SURFACE COURSE
COMPACTED SUBGRADE
ITEM 610(1) - SODDING
ITEM 608(1) - 100mm THK TOP SOIL
- ITEM 311(1)b - 250mm THK PCC PAVEMENT (MAIN BYPASS)
ITEM 200(1) - 250mm THK AGGREGATE SUBBASE
COMPACTED SUBGRADE
EXISTING GROUND LINE
ITEM 102(1) - UNSUITABLE EXCAVATION
ITEM 311(1)d - 180mm THK CONCRETE SHOULDER

1A NORMAL SECTION - INITIAL STAGE
RP-13

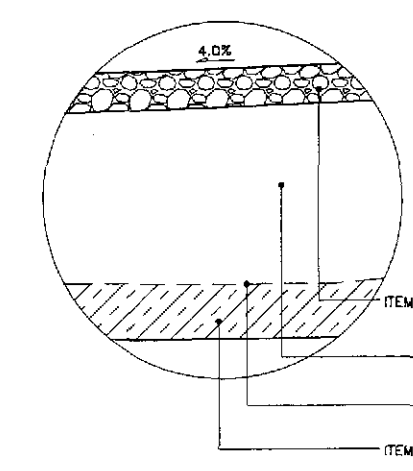
1 TYPICAL ROADWAY SECTIONS
RP-13 SCALE 1:100



1F DETAIL
RP-13 SCALE 1:20



CUT SECTION



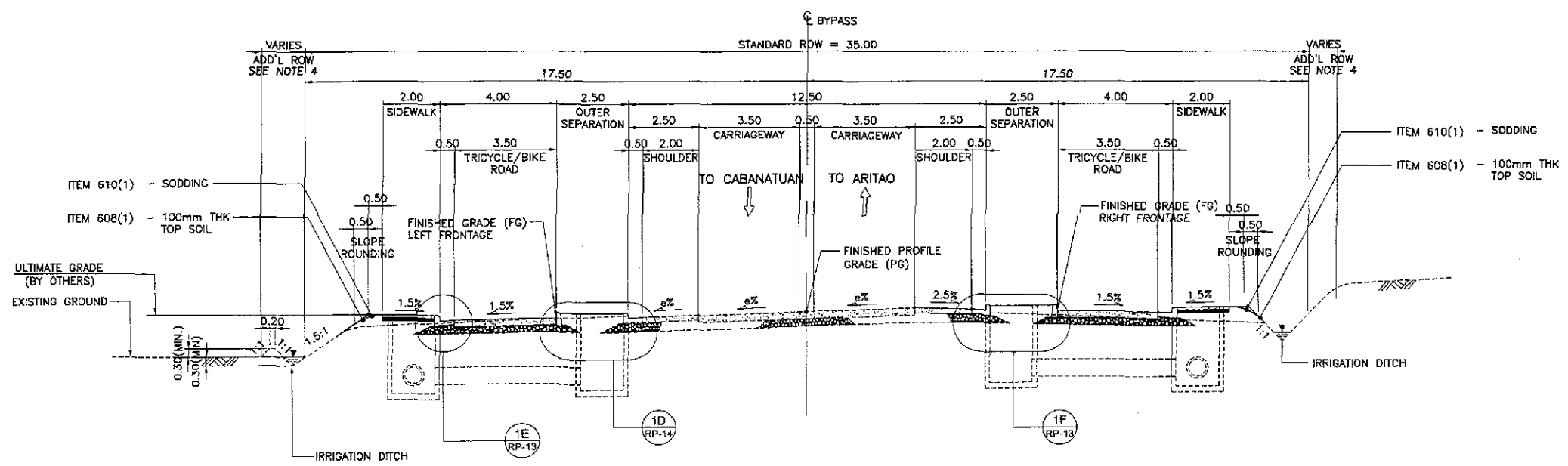
1D DETAIL
RP-13 SCALE 1:20

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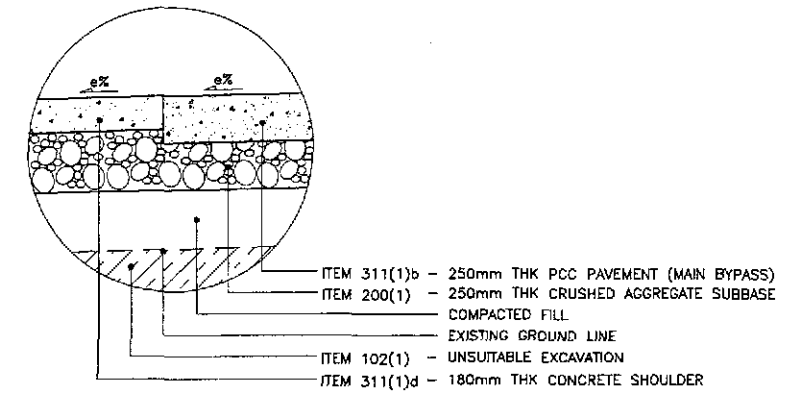
KATAHIRA & ENGINEERS INTERNATIONAL
YEC YACHIYO ENGINEERING CO., LTD.

DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS		
CHECKED	9/7/02	ACACIO	BUREAU OF DESIGN		
SUBMITTED	9/11/02	TRAJANO	OFFICE OF THE SECRETARY		
			Submitted By:	Reviewed By:	Recommended By:
			DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES DC, Director IV
				MANUEL M. BONDAN Undersecretary	SIMEDON A. DATUMANONG Secretary

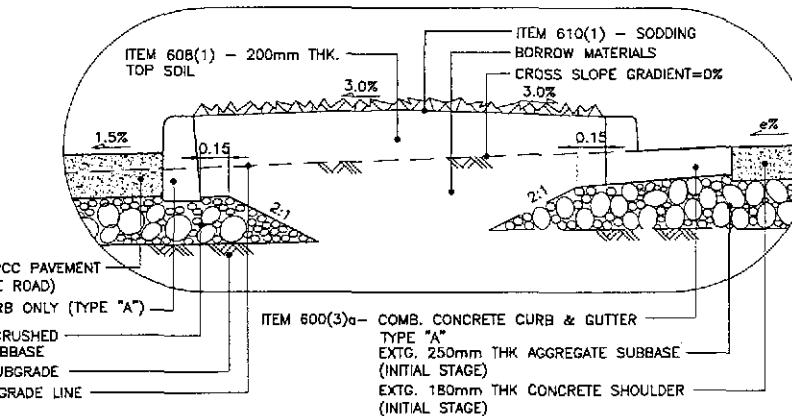
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	TYPICAL ROADWAY SECTIONS 1 OF 2 (INITIAL & ULTIMATE STAGE)	RP-13
SAN JOSE BYPASS	FULL SIZE A1		



2B SUPERELEVATED SECTION - ULTIMATE STAGE
SCALE 1:100

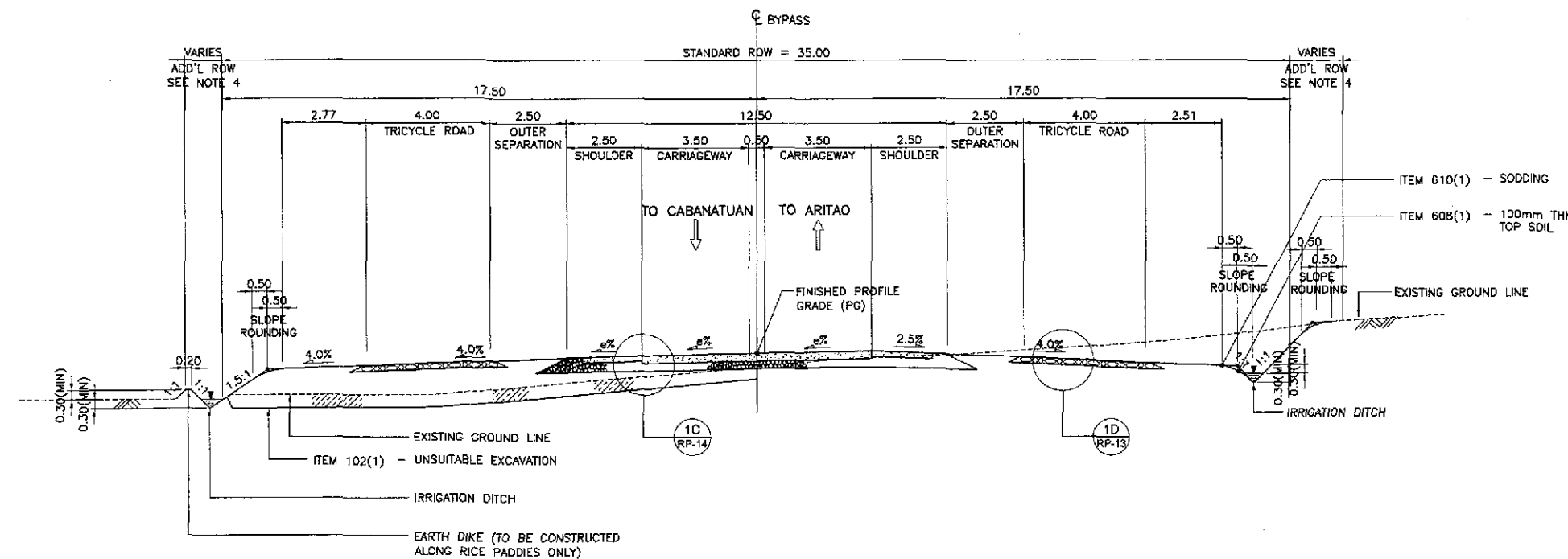


1C DETAIL
SCALE 1:20



1D DETAIL
SCALE 1:20

- ITEM 610(1) - SODDING
- ITEM 608(1) - 100mm THK TOP SOIL
- ITEM 311(1)b - 250mm THK PCC PAVEMENT (MAIN BYPASS)
- ITEM 200(1) - 250mm THK CRUSHED AGGREGATE SUBBASE
- COMPACTED FILL
- EXISTING GROUND LINE
- ITEM 102(1) - UNSUITABLE EXCAVATION
- ITEM 311(1)d - 180mm THK CONCRETE SHOULDER
- ITEM 311(1)c - 230mm THK PCC PAVEMENT (TRICYCLE/BIKE ROAD)
- ITEM 600(1)a - CONCRETE CURB ONLY (TYPE "A")
- ITEM 200(1) - 250mm THK CRUSHED AGGREGATE SUBBASE
- COMPACTED SUBGRADE
- INITIAL STAGE GRADE LINE
- ITEM 600(3)a - COMB. CONCRETE CURB & GUTTER TYPE "A"
- EXTG. 250mm THK AGGREGATE SUBBASE (INITIAL STAGE)
- EXTG. 180mm THK CONCRETE SHOULDER (INITIAL STAGE)



EMBANKMENT SECTION

CUT SECTION

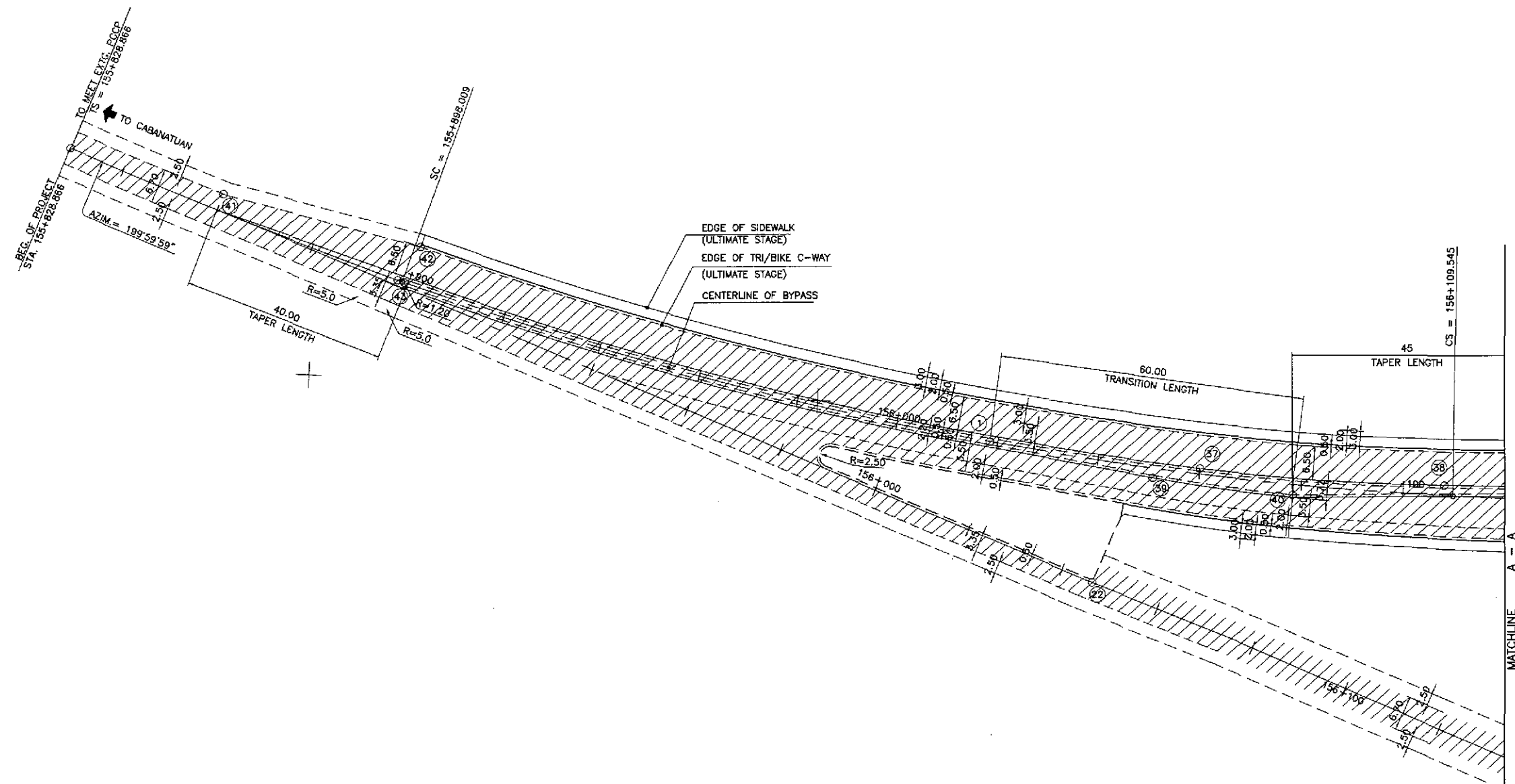
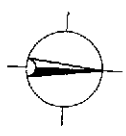
2A SUPERELEVATED SECTION - INITIAL STAGE
SCALE 1:100

2 TYPICAL ROADWAY SECTIONS
SCALE 1:100

PAVEMENT DESIGN PARAMETERS	
1. TRAFFIC (FOR 25 YEARS DESIGN LIFE) DESIGN ESAL	2.20 x 10 ⁶
2. DESIGN CBR SUBGRADE CBR	5.00 %
3. ROADBED RESILIENT MODULUS	M _R = 5,500 psi = 37.92 MPa E _{SB} = 13,000 psi = 89.64 MPa E _{SS} = 23,000 psi = 158.58 MPa
4. PERFORMANCE CRITERIA Δ PSI	2
5. DESIGN RELIABILITY Z _R	50 %
S _q	0.35
6. DRAINAGE COEFFICIENT RIGID	1
7. LAYER COEFFICIENT	
a ₁ (FOR AC)	0.39
a ₂ (FOR BASE)	0.105
a ₃ (FOR SUBBASE)	0.095
8. PAVEMENT CONSTRUCTION THICKNESS	
PCCP	250mm THK
SUBBASE	250mm THK

- NOTES :**
- FINISHED PROFILE GRADE (PG) ALONG BYPASS IS TAKEN FROM THE CENTERLINE WHEREAS FINISHED GRADE (FG) IS RECKONED FROM THE PROFILE GRADE RELATIVE TO THE PAVEMENT CROSS SLOPE.
 - FOR SCHEDULE OF QUANTITIES, SEE SHEET NO. RG-04 TO RG-10.
 - ROADWAY SECTIONS OTHER THAN THE STANDARD WIDTH SHALL BE VARIED DUE TO HORIZONTAL TRANSITION OF SERVICE ROAD/ OR FRONTAGE ROAD, MEDIAN DIVISIONAL ISLANDS, OUTER SEPARATION AND DUE TO HEIGHT OF EMBANKMENT.
 - R.O.W. WIDTH OTHER THAN THE STANDARD WIDTH VARIES IN ACCORDANCE WITH NOTE 3.
 - SIDESLOPES OF 1.5:1 OR FLATTER SHALL BE PROTECTED BY SODDING. SIDESLOPES ALONG AREAS PRONE TO FLOODING SHALL BE PROTECTED BY GROUTED RIPRAP AT 300mm MINIMUM THICKNESS. SIDESLOPES ALONG BUILT-UP AREAS SHALL BE PROTECTED BY STONE MASONRY AND/ OR RETAINING WALLS OR AS DIRECTED BY THE ENGINEER.
 - SEE SHEET NO. RG-07 FOR UNSUITABLE EXCAVATION SCHEDULE.

	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilarde), Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : TYPICAL ROADWAY SECTIONS 2 OF 2 SUPERELEVATED SECTIONS (INITIAL & ULTIMATE STAGE)	SHEET NO. : RP-14	
	CHECKED	DATE	SIGNATURE						Submitted By: PJHL - PMO Reviewed By: BUREAU OF DESIGN Recommended By: OFFICE OF THE SECRETARY
	SUBMITTED	DATE	SIGNATURE						Submitted By: DANILO C. TRAJANO Reviewed By: JOSEFINA M. ALAGAR Recommended By: GILBERTO S. REYES Approved By: MANUEL M. BONDAN SIMEON A. DATUMANONG



- NOTES:
1. FOR TYPICAL ROAD CROSS-SECTIONS SEE SHT. NO. RP-13 & RP-14.
 2. SHADED AREA ARE OF INITIAL STAGE.

TABLE OF COORDINATES			
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
(1)	1744934.026	496206.252	STA. 156+018.448, BEG. OF TRANSITION LENGTH
(2)	1744955.554	496232.603	STA. 156+048.390, END OF TWO WAY TRAFFIC
(3)	1744975.705	496209.235	STA. 156+060.259, INT. OF RADIUS 450 & RADIUS 898.90
(38)	1745022.778	496209.985	STA. 156+107.442, END OF RADIUS 450
(39)	1744966.289	496211.499	STA. 156+051.023, BEG. OF RADIUS 321.10
(40)	1744993.687	496213.828	STA. 156+078.448, END OF RADIUS 321.10 & BEG. OF TAPER
(4)	1744781.529	496185.566	STA. 155+860.000, END OF TAPER
(42)	1744820.596	496174.065	STA. 155+900.000, BEG. OF TAPER
(43)	1744817.799	496181.157	STA. 155+899.400, END OF ISLAND NOSING

GEOMETRIC DESIGN LAYOUT
INTERSECTION A-1 (STA. 156+168.946) - ULTIMATE STAGE

1
RI-01 SCALE 1:500

<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> <p>KATAHIRA & ENGINEERS INTERNATIONAL</p> <p>YACHINO ENGINEERING CO., LTD.</p>	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	9/6/02	[Signature]	BUREAU OF DESIGN				THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	SAN JOSE BYPASS INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-1 (ULTIMATE STAGE)	RI-01
	CHECKED	9/9/02	[Signature]	Submitted By:	Reviewed By:	Recommended By:	Approved By:				
SUBMITTED	9/16/02	[Signature]	DANILO C. TRAJANG Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONGAN Undersecretary	SIMEDN A. DATUMANONG Secretary	FULL SIZE A1			

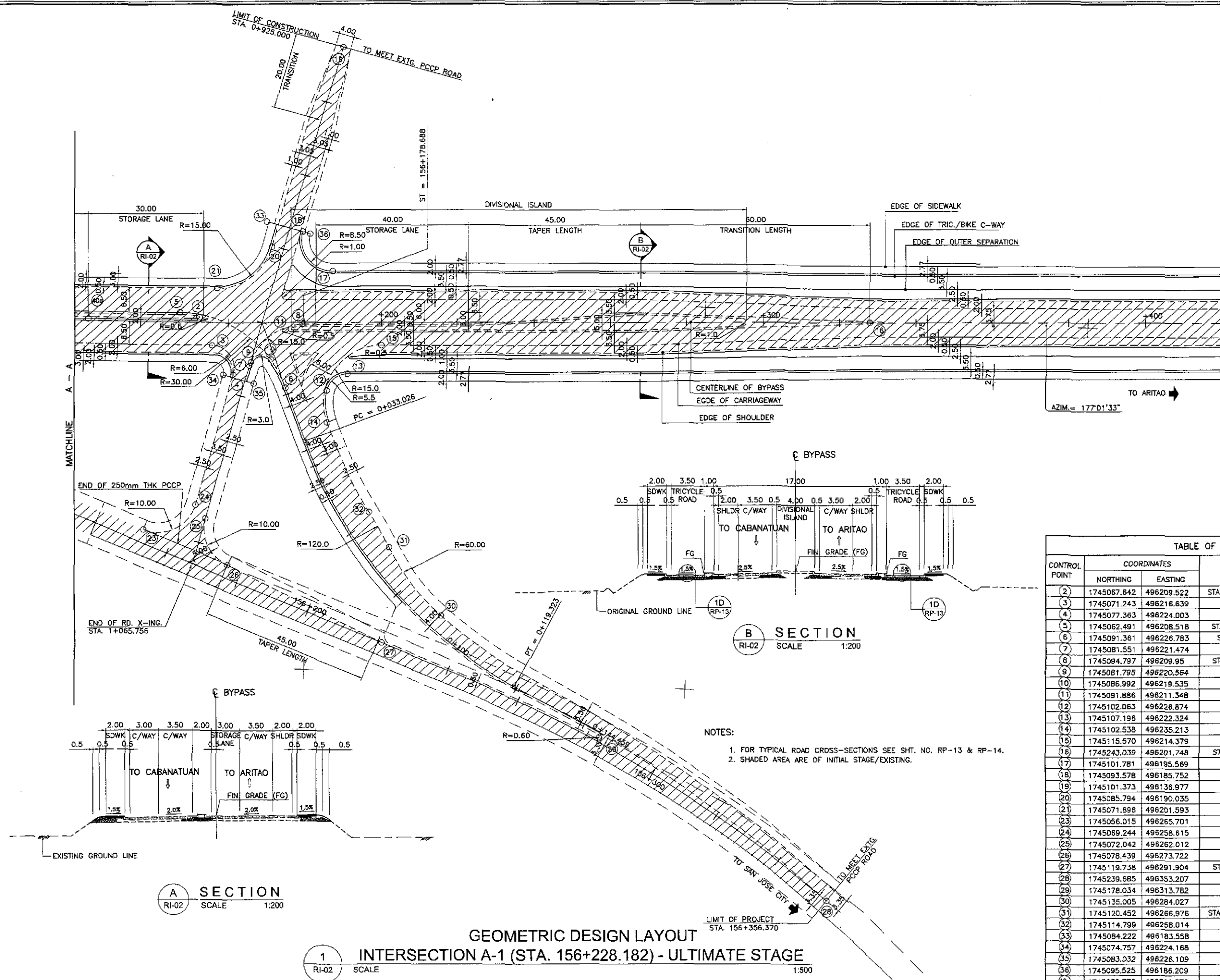
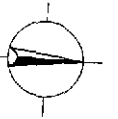
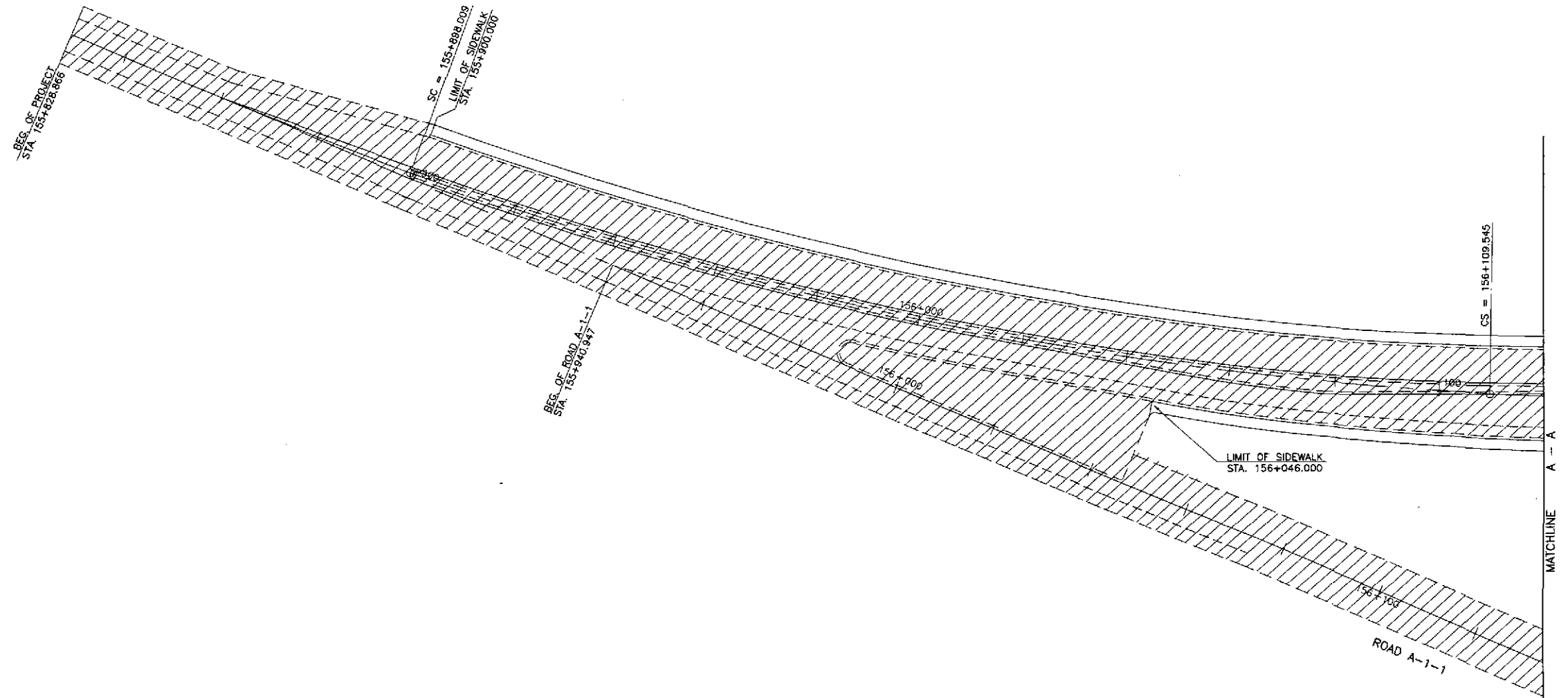
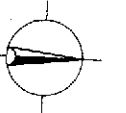


TABLE OF COORDINATES			
CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
(2)	1745067.642	496209.522	STA. 156+152.383, END OF ISLAND NOSING
(3)	1745071.243	496216.639	STA. 156+155.652, BEG. OF RADIUS 6
(4)	1745077.363	496224.003	END OF RADIUS 6
(5)	1745062.491	496208.518	STA. 156+147.274, BEG. OF TURNING RADIUS 30
(6)	1745091.361	496226.783	STA. 0+018.234, END OF TURNING RADIUS 30
(7)	1745081.551	496221.474	BEG. OF TURNING RADIUS 10
(8)	1745084.797	496209.95	STA. 156+179.488, END OF TURNING RADIUS 10
(9)	1745081.795	496220.564	STA. 156+165.895, BEG. OF RADIUS 3.0
(10)	1745086.992	496219.535	STA. 156+171.183, END OF RADIUS 3.0
(11)	1745091.886	496211.348	STA. 156+176.509, END OF ISLAND NOSING
(12)	1745102.063	496226.874	BEG. OF RADIUS 5.50
(13)	1745107.196	496222.324	STA. 156+191.229, END OF RADIUS 5.50
(14)	1745102.538	496235.213	STA. 0+030.358, BEG. OF RADIUS 15
(15)	1745115.670	496214.379	STA. 156+200.004, END OF RADIUS 15
(16)	1745243.039	496201.748	STA. 156+327.956, BEG. OF TRANSITION LENGTH
(17)	1745101.781	496195.569	STA. 156+187.209, BEG. OF RADIUS B.0
(18)	1745093.578	496185.752	END OF RADIUS 8.00
(19)	1745101.373	496138.977	LIMIT OF CONSTRUCTION
(20)	1745085.794	496190.035	BEG. OF RADIUS 15
(21)	1745071.898	496201.593	STA. 156+157.008, END OF RADIUS 15
(23)	1745056.015	496265.701	STA. 156+152.067, BEG. OF RADIUS 10
(24)	1745069.244	496258.615	END OF RADIUS 10
(25)	1745072.042	496262.012	BEG. OF RADIUS 10
(26)	1745078.439	496273.722	STA. 156+175.938, END OF RADIUS 10
(27)	1745119.738	496291.904	STA. 156+220.938, BEG. OF TRANSITION LENGTH
(28)	1745239.685	496353.207	LIMIT OF CONSTRUCTION
(29)	1745178.034	496313.782	STA. 156+283.154, END OF ISLAND NOSING
(30)	1745135.005	496284.027	STA. 0+092.241, BEG. OF RADIUS 60
(31)	1745120.452	496266.976	STA. 0+068.905, INT. OF RADIUS 60 & RADIUS 120
(32)	1745114.799	496258.014	STA. 0+057.742, END OF RADIUS 120
(33)	1745084.222	496183.558	LIMIT OF SHOULDER
(34)	1745074.757	496224.168	LIMIT OF SHOULDER
(35)	1745083.032	496226.109	LIMIT OF SHOULDER
(36)	1745095.525	496186.209	LIMIT OF SHOULDER
(40)	1745038.772	496211.279	STA. 156+123.448, BEG. OF STORAGE

NOTES:
 1. FOR TYPICAL ROAD CROSS-SECTIONS SEE SHT. NO. RP-13 & RP-14.
 2. SHADED AREA ARE OF INITIAL STAGE/EXISTING.

GEOMETRIC DESIGN LAYOUT
 INTERSECTION A-1 (STA. 156+228.182) - ULTIMATE STAGE

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/7/02	<i>[Signature]</i>	BUREAU OF DESIGN			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	SAN JOSE BYPASS INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-1 (ULTIMATE STAGE)	RI-02
	SUBMITTED	9/10/02	<i>[Signature]</i>	Submitted By:	Reviewed By:	Recommended By:	SAN JOSE BYPASS	FULL SIZE A1		
			DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary			



NOTES:

1. FIN. SPOT ELEVATIONS OF THE EDGE OF PAVEMENT AND SHOULDER PRESENTED HEREIN WERE REFERRED FROM THE CENTERLINE/BASELINE.
2. SPOT ELEVATIONS ARE AT TEN (10) METERS REGULAR INTERVAL UNLESS OTHERWISE INDICATED ON THE PLANS.
3. FOR GEOMETRIC DESIGN LAYOUT OF INTERSECTION, SEE SHEET NO. RI-01 & RI-02.

PAVING PLAN

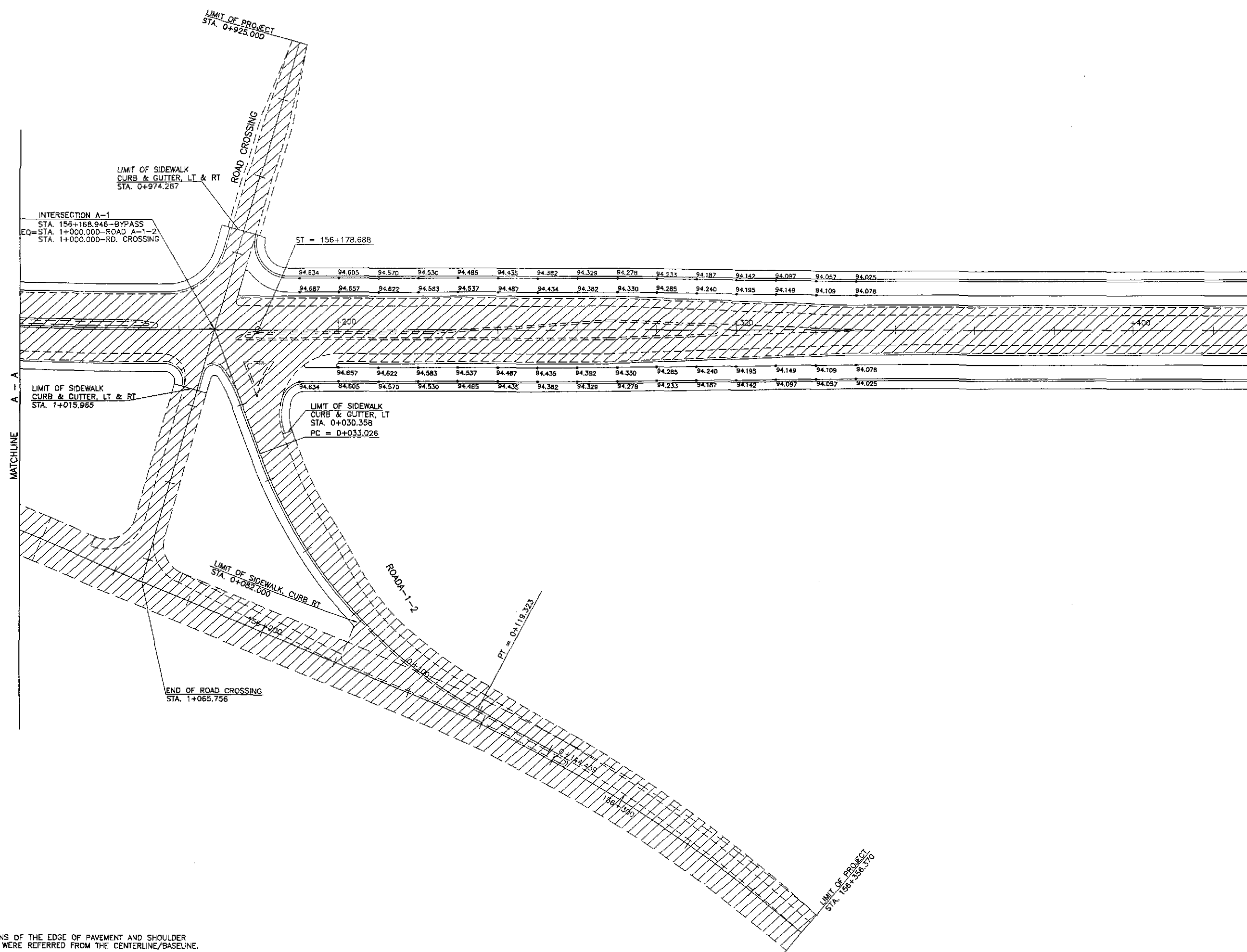
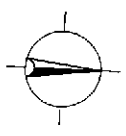
INTERSECTION A-1 (STA. 156+168.946) - ULTIMATE STAGE



SCALE

1:500

	DESIGNED	9/7/02			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/9/02			Submitted By: PUHL -- PMO Reviewed By: JOSEFINA M. ALAGAR Recommended By: GILBERTO S. REYES Recommended By: MANUEL M. BONOAN Approved By: SIMEON A. DATUMANONG	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:500	SAN JOSE BYPASS INTERSECTION DETAIL PAVING PLAN INTERSECTION A-1 (ULTIMATE STAGE)	RI-03			
	SUBMITTED	9/10/02			DANILO C. TRAJANO Project Director JOSEFINA M. ALAGAR Chief, Highways Division GILBERTO S. REYES OIC, Director IV MANUEL M. BONOAN Undersecretary SIMEON A. DATUMANONG Secretary	SAN JOSE BYPASS	FULL SIZE A1					

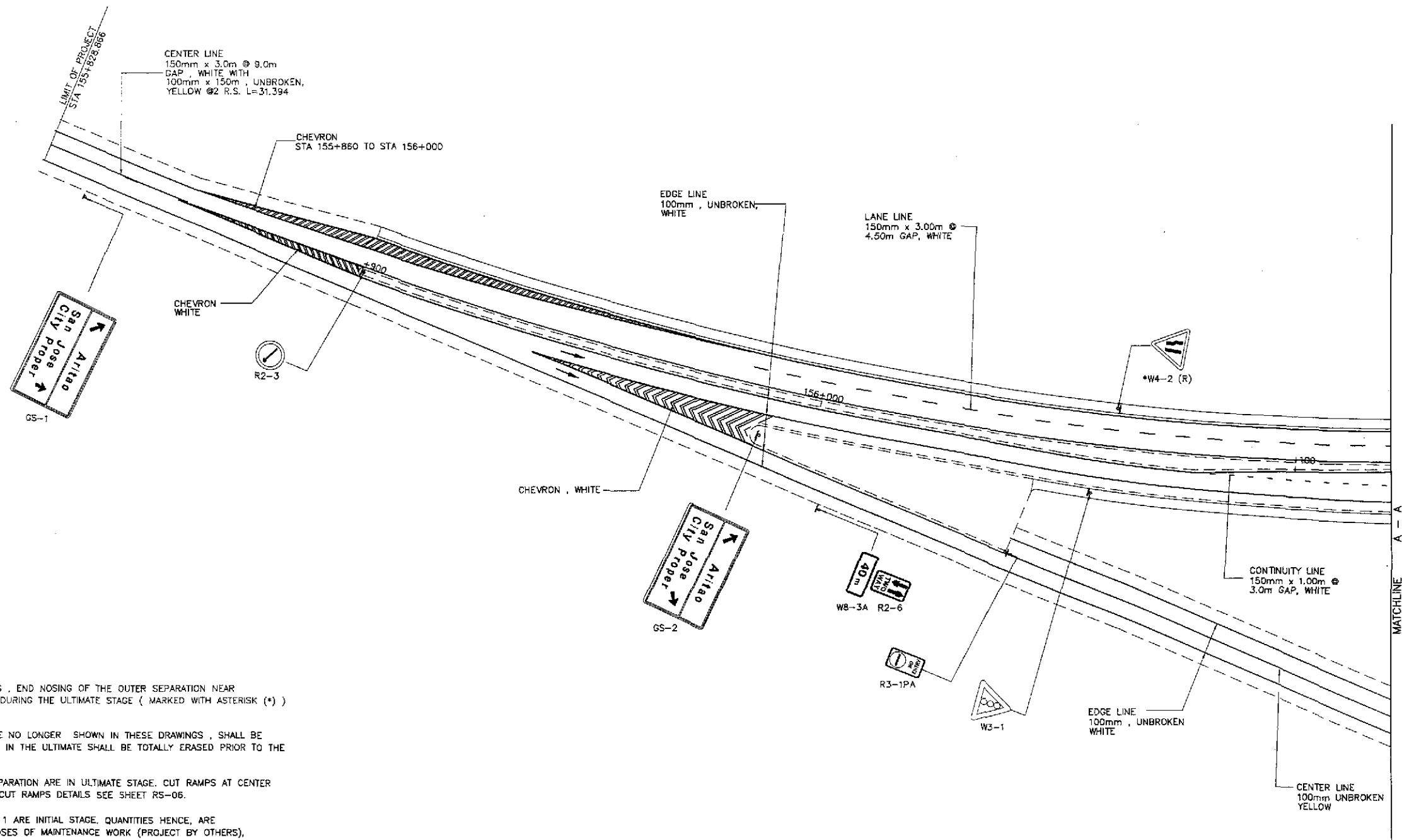
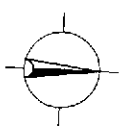


- NOTES:
1. FIN. SPOT ELEVATIONS OF THE EDGE OF PAVEMENT AND SHOULDER PRESENTED HEREIN WERE REFERRED FROM THE CENTERLINE/BASELINE.
 2. SPOT ELEVATIONS ARE AT TEN (10) METERS REGULAR INTERVAL UNLESS OTHERWISE INDICATED ON THE PLANS.
 3. FOR GEOMETRIC DESIGN LAYOUT OF INTERSECTION, SEE SHEET NO. RI-01 & RI-02.

A
RI-04

PAVING PLAN
INTERSECTION A-1 (STA. 156+168.946) - ULTIMATE STAGE
SCALE 1:500

	DESIGNED	DATE	SIGNATURE		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) SAN JOSE BYPASS	SCALE :	SHEET CONTENTS : SAN JOSE BYPASS INTERSECTION DETAIL PAVING PLAN INTERSECTION A-1 (ULTIMATE STAGE)	SHEET NO. :
	CHECKED	9/7/02	R. GO		BUREAU OF DESIGN					1:500		RI-04
	SUBMITTED	9/10/02	Ms. Raula		Submitted By:	Reviewed By:	Recommended By:	Approved By:		FULL SIZE A1		
			TEAM LEADER	DANILDO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary				



NOTES:

1. ALL PAVEMENT MARKINGS ALONG THE TRICYCLE ROADS, END NOSING OF THE OUTER SEPARATION NEAR INTERSECTIONS & ALONG AREAS WHERE PAVED ONLY DURING THE ULTIMATE STAGE (MARKED WITH ASTERISK (*)) ARE QUANTITIES IN THE ULTIMATE STAGE.
2. PAVEMENT MARKINGS IN THE INITIAL STAGE WHICH ARE NO LONGER SHOWN IN THESE DRAWINGS, SHALL BE REMOVED. LIKEWISE INITIAL STAGE MARKINGS MODIFIED IN THE ULTIMATE SHALL BE TOTALLY ERASED PRIOR TO THE CONSTRUCTION OF THE NEW ONE.
3. ALL CUT RAMPS ALONG THE SIDEWALKS & OUTER SEPARATION ARE IN ULTIMATE STAGE. CUT RAMPS AT CENTER MEDIAN & CORNER ISLANDS ARE INITIAL STAGE. FOR CUT RAMPS DETAILS SEE SHEET RS-06.
4. OTHER PAVEMENT MARKINGS NOT MENTIONED IN ITEM 1 ARE INITIAL STAGE. QUANTITIES HENCE, ARE EXCLUDED IN THIS STAGE (ULTIMATE) . FOR PURPOSES OF MAINTENANCE WORK (PROJECT BY OTHERS), THESE ITEMS ARE SHOWN.
5. ALL TRAFFIC SIGNS ARE EXISTING QUANTITIES (INSTALLED IN THE INITIAL STAGE) . SIGNS MARKED WITH ASTERISK (*) ARE TO BE REINSTALLED TO PROPER POSITION AS SHOWN IN THE STANDARD DRAWING. REFER SHEET NOS. RS-14 & RS-15.

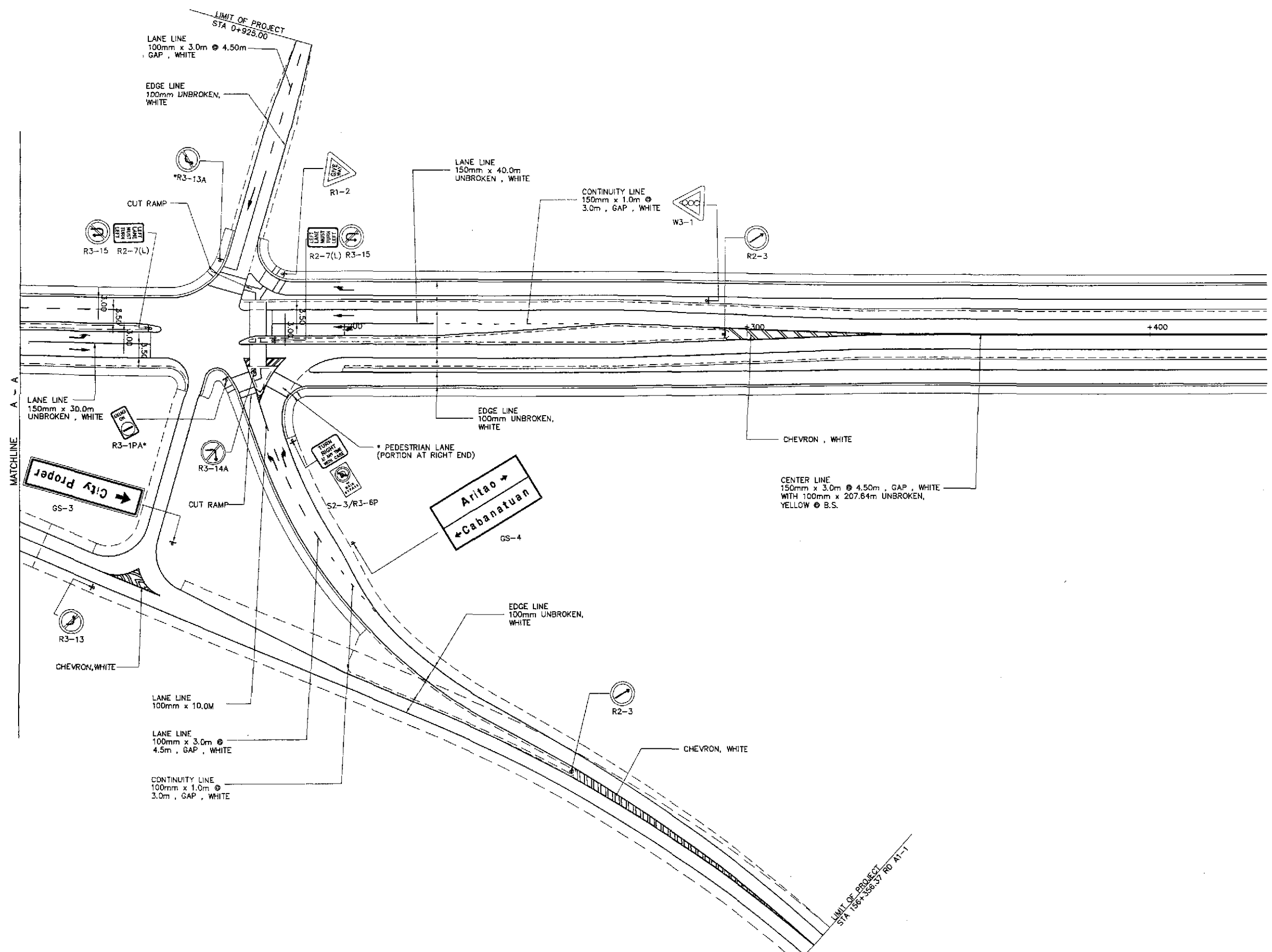
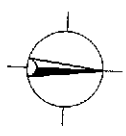
**TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMPS LAYOUT
INTERSECTION A-1, STA. 156+168.946 (ULTIMATE STAGE)**

A
R1-05

SCALE

1:500

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/9/02	<i>S. S. S.</i>	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) SAN JOSE BYPASS	1:500 FULL SIZE A1	SAN JOSE BYPASS TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMPS LAYOUT INTERSECTION A-1 (ULTIMATE STAGE)	R1-05
	SUBMITTED	9/11/02	<i>M. M. M.</i>	Submitted By:	Reviewed By:	Recommended By:	Approved By:				
			DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary				

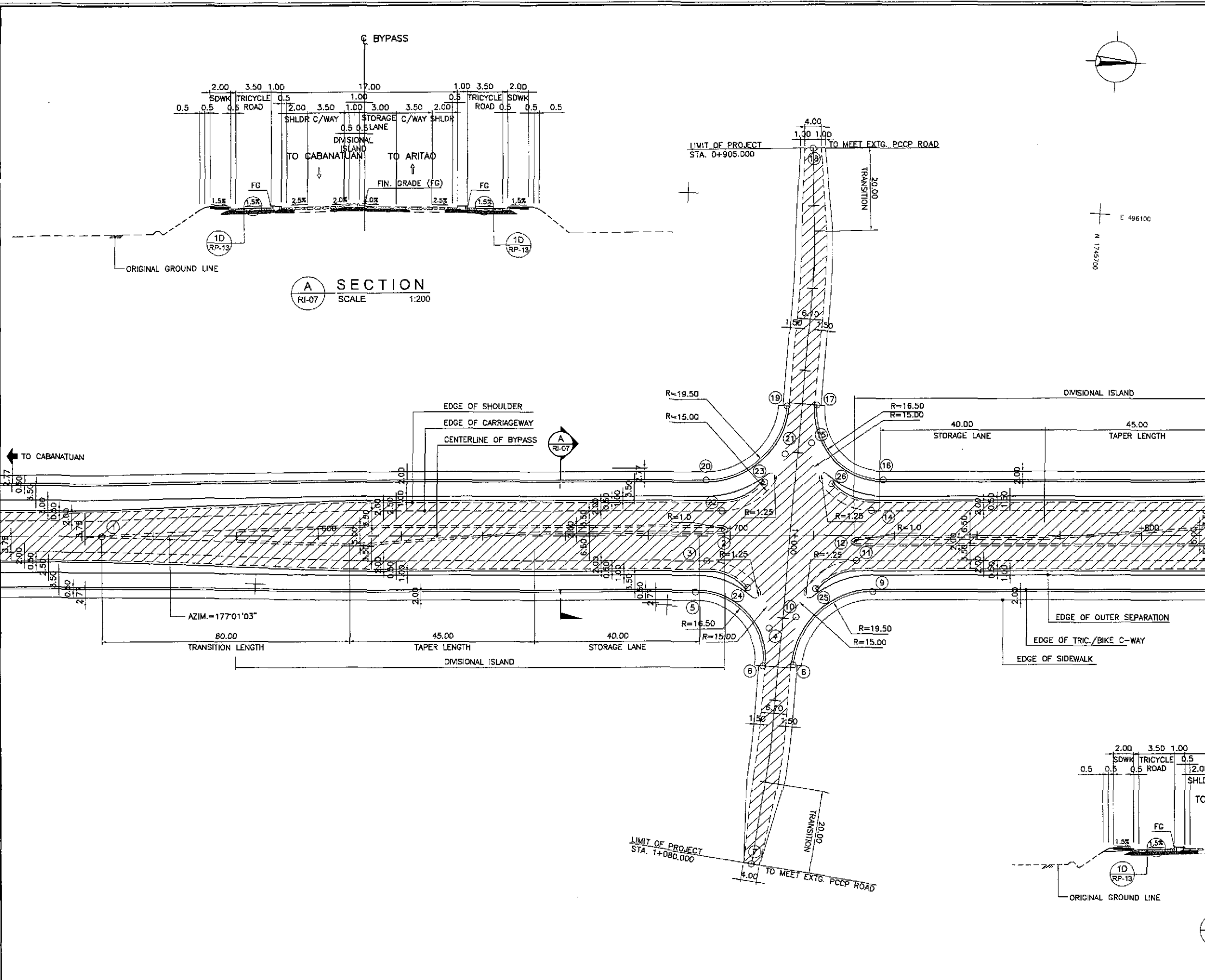


TRAFFIC SIGNS , PAVEMENT MARKINGS AND CUT RAMPS LAYOUT
 INTERSECTION A-1a, STA. 156+168.946 (ULTIMATE STAGE)

A
 R1-06

SCALE 1:500

	DESIGNED	9/9/02	S. LUNA	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/9/02	S. JOSE		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			1:500	SAN JOSE BYPASS TRAFFIC SIGNS , PAVEMENT MARKINGS AND CUT RAMPS LAYOUT INTERSECTION A-1a (ULTIMATE STAGE)	R1-06
	SUBMITTED	9/10/02	M. RAUCH		SAN JOSE BYPASS			FULL SIZE A1		
	Submitted By: DANILO C. TRAJANO Project Director				Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division			Recommended By: GILBERTO S. REYES OIC, Director IV		

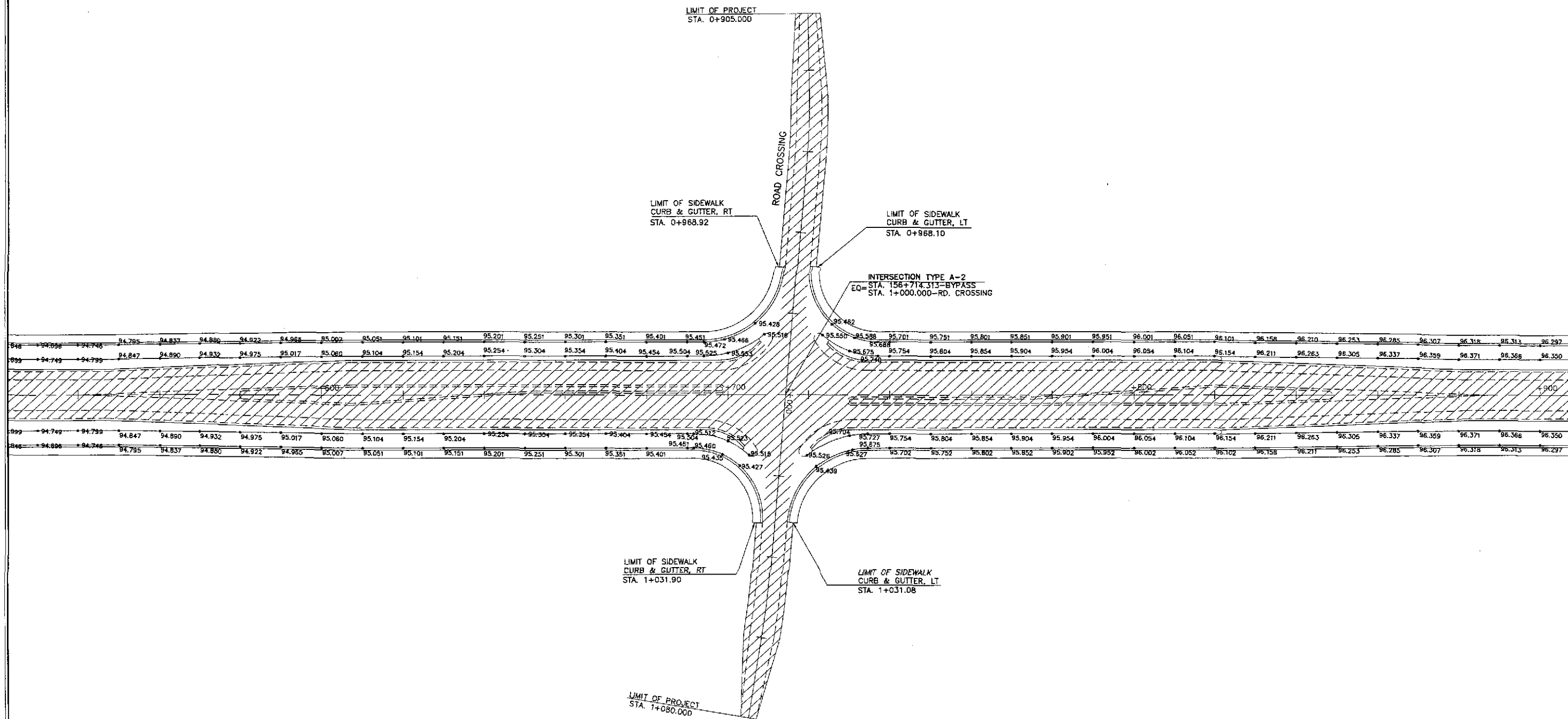
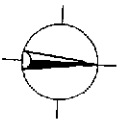


CONTROL POINT	COORDINATES		REMARKS
	NORTHING	EASTING	
(1)	1745462.274	496190.357	STA. 156+547.487, BEG. OF TRANSITION
(2)	1745613.148	496181.017	STA. 156+698.642, END OF ISLAND NOSING
(3)	1745609.225	496188.730	STA. 156+694.325, BEG. OF RADIUS 15
(4)	1745624.993	496204.261	END OF RADIUS 15
(5)	1745606.810	496196.366	STA. 156+691.516, BEG. OF RADIUS 16.50
(6)	1745624.155	496213.451	END OF RADIUS 16.50
(7)	1745623.752	496261.487	LIMIT OF CONSTRUCTION
(8)	1745631.281	496212.892	BEG. OF RADIUS 19.50
(9)	1745649.756	496194.135	STA. 156+734.520, END OF RADIUS 19.50
(10)	1745631.207	496201.278	BEG. OF RADIUS 15
(11)	1745645.419	496186.849	STA. 156+730.567, END OF RADIUS 15
(12)	1745644.603	496182.386	STA. 156+729.983, END OF ISLAND NOSING
(13)	1745795.565	496173.041	STA. 156+881.227, BEG. OF TRANSITION
(14)	1745648.525	496174.672	STA. 156+734.301, BEG. OF RADIUS 15
(15)	1745632.757	496159.141	END OF RADIUS 15
(16)	1745650.941	496167.037	STA. 156+737.109, BEG. OF RADIUS 16.50
(17)	1745633.596	496149.952	END OF RADIUS 16.50
(18)	1745629.365	496087.929	LIMIT OF CONSTRUCTION
(19)	1745626.470	496150.511	BEG. OF RADIUS 19.50
(20)	1745607.995	496169.268	STA. 156.694.106, END OF RADIUS 19.50
(21)	1745626.543	496162.124	BEG. OF RADIUS 15
(22)	1745612.332	496176.553	STA. 156+698.059, END OF RADIUS 15
(23)	1745622.125	496169.141	STA. 156+708.222, LIMIT OF SHOULDER
(24)	1745619.423	496194.751	STA. 156+704.196, LIMIT OF SHOULDER
(25)	1745635.627	496194.262	STA. 156+720.404, LIMIT OF SHOULDER
(26)	1745638.329	496168.652	STA. 156+724.429, LIMIT OF SHOULDER

GEOMETRIC DESIGN LAYOUT
INTERSECTION A-2 (STA. 156+714.313) - ULTIMATE STAGE

NOTES:
 1. FOR TYPICAL ROAD CROSS-SECTIONS SEE SHT. NO. RP-13 & RP-14.
 2. SHADED AREA ARE OF INITIAL STAGE.

	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	9/16/02	A. ORONCE	DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) SAN JOSE BYPASS	AS SHOWN	SAN JOSE BYPASS INTERSECTION DETAIL GEOMETRIC DESIGN LAYOUT INTERSECTION A-2 (ULTIMATE STAGE)	RI-07
	CHECKED	9/19/02	S. JOSE	BUREAU OF DESIGN						
	SUBMITTED	9/18/02	M. KIMURA	OFFICE OF THE SECRETARY						
Submitted By:		Reviewed By:		Recommended By:		Approved By:				
DANILDO C. TRAJANO Project Director		JOSEFINA M. ALAGAR Chief, Highways Division		GILBERTO S. REYES OIC, Director IV		MANUEL M. BONDAN Undersecretary		SIMEON A. DATUMANONG Secretary		



NOTES:

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PAVING PLAN

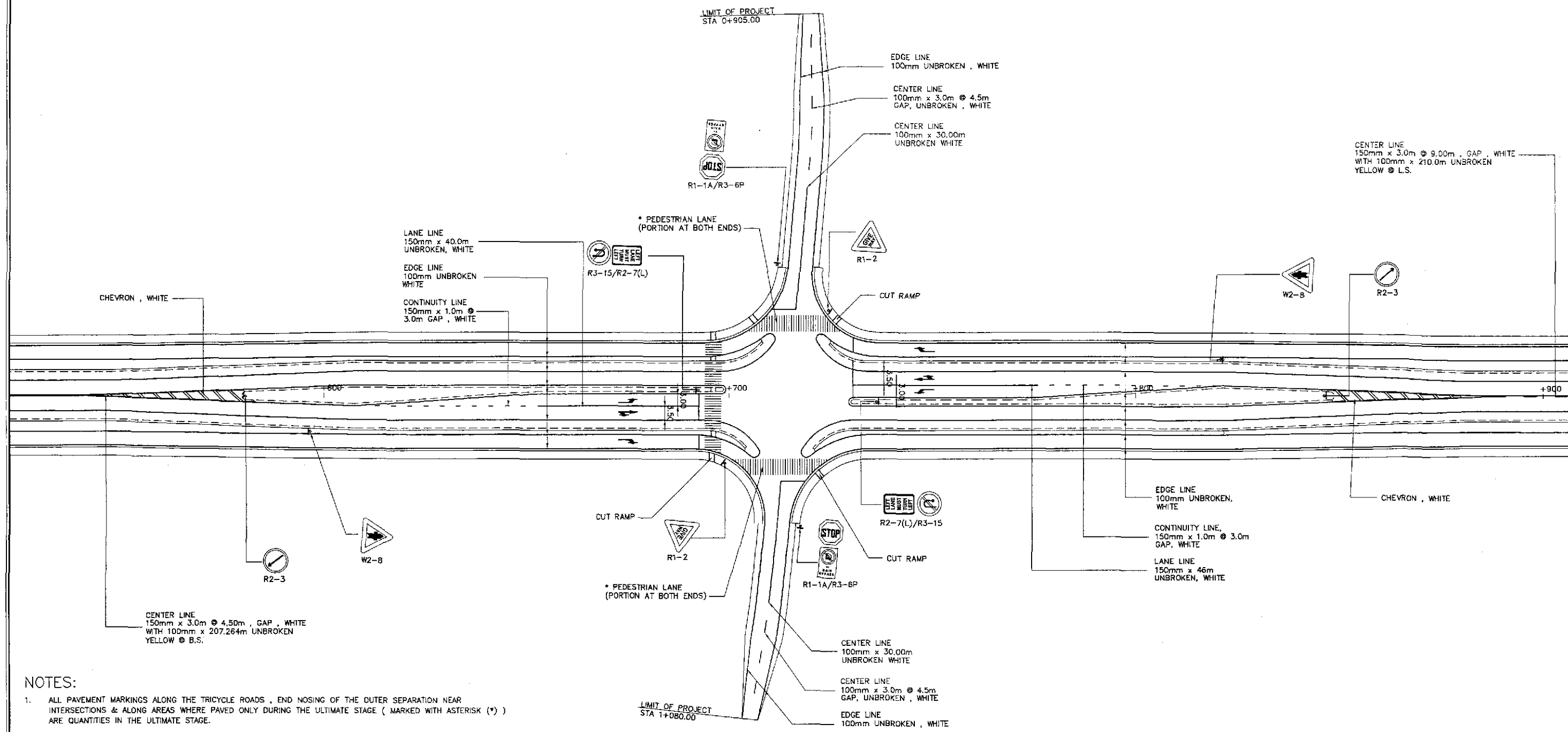
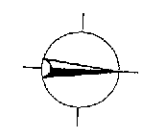
INTERSECTION A-2 (STA. 156+714.313) - ULTIMATE STAGE



SCALE

1:500

	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/9/02	<i>S. Jose</i>		BUREAU OF DESIGN				THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	1:500	SAN JOSE BYPASS INTERSECTION DETAIL PAVING PLAN INTERSECTION A-2 (ULTIMATE STAGE)	RI-08
	SUBMITTED	9/10/02	<i>M. K. ...</i>		Submitted By:	Reviewed By:	Recommended By:	Approved By:	SAN JOSE BYPASS	FULL SIZE A1		
				DANILO C. TRAJANO Project Director	JOSEFINA M. ALAGAR Chief, Highways Division	GILBERTO S. REYES OIC, Director IV	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary				



NOTES:

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**TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMPS LAYOUT
INTERSECTION A-2, STA. 156+714.313 (ULTIMATE STAGE)**



SCALE

1:500

	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :				SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	9/9/02	S. LUNA		<p>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p>				1:500	<p>SAN JOSE BYPASS TRAFFIC SIGNS, PAVEMENT MARKINGS AND CUT RAMPS LAYOUT INTERSECTION A-2 (ULTIMATE STAGE)</p>	R1-09
	SUBMITTED	9/11/02	M. BONDAN		<p>SAN JOSE BYPASS</p>				FULL SIZE A1		
<p>Submitted By: DANILO C. TRAJANO Project Director</p>				<p>Reviewed By: JOSEFINA M. ALAGAR Chief, Highways Division</p>				<p>Recommended By: GILBERTO S. REYES OIC, Director IV</p>			
<p>Submitted By: MANUEL M. BONDAN Undersecretary</p>				<p>Recommended By: SIMEON A. DATUMANONG Secretary</p>							