JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REPUBLIC OF THE PHILIPPINES

THE STUDY ON ROAD NETWORK IMPROVEMENT FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS IN THE REPUBLIC OF THE PHILIPPINES

VOLUME-4

PRELIMINARY DESIGN DRAWINGS

METRO ILOILO

CIRCUMFERENTIAL ROAD NO.1
ILOILO-STA. BARBARA ROAD
R-4 BYPASS ROAD

October 2004

KATAHIRA & ENGINEERS INTERNATIONAL
ALMEC CORPORATION

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CIRCUMFERENTIAL ROAD NO.1
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R-4 BYPASS ROAD

KATAHIRA & ENGINEERS INTERNATIONAL

in association with

ALMEC CORPORATION

INDEX OF DRAWINGS

THE STUDY ON ROAD NETWORK IMPROVEMENT
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

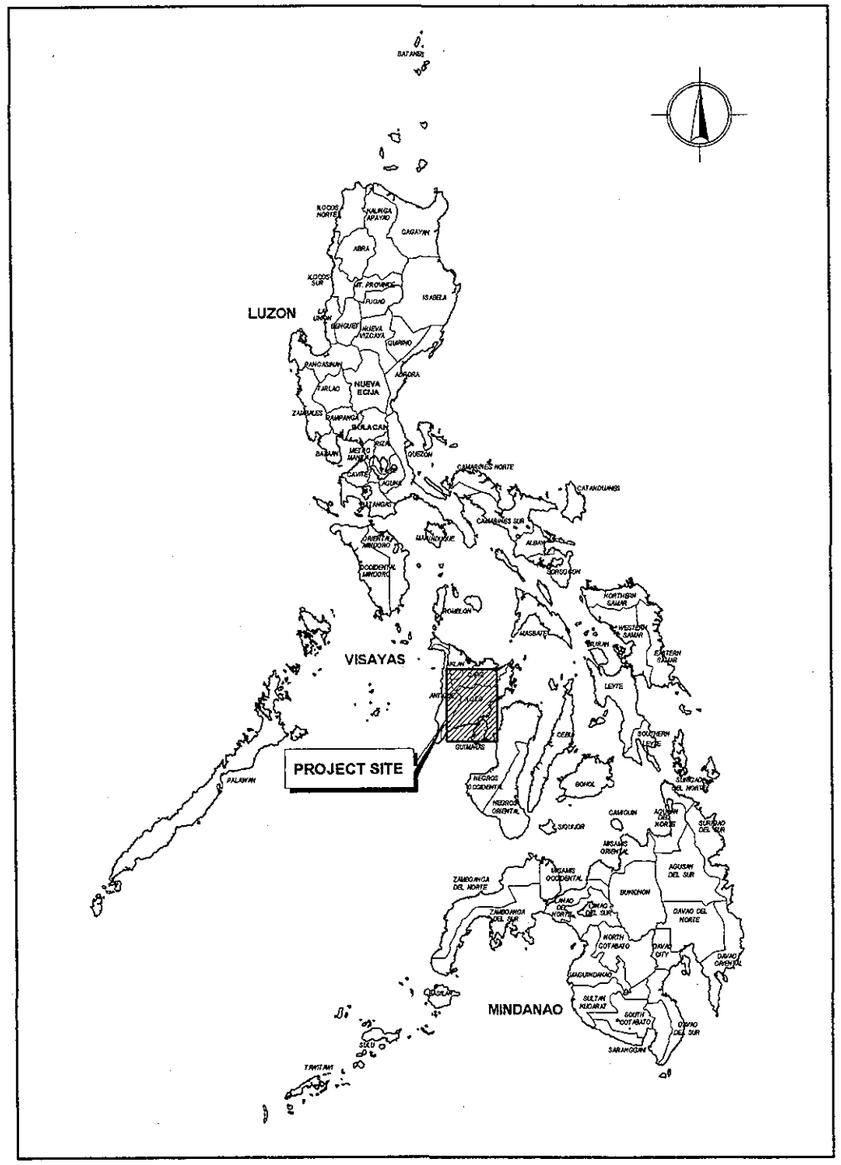
SCALE : -

METRO ILOILO
INDEX OF DRAWINGS

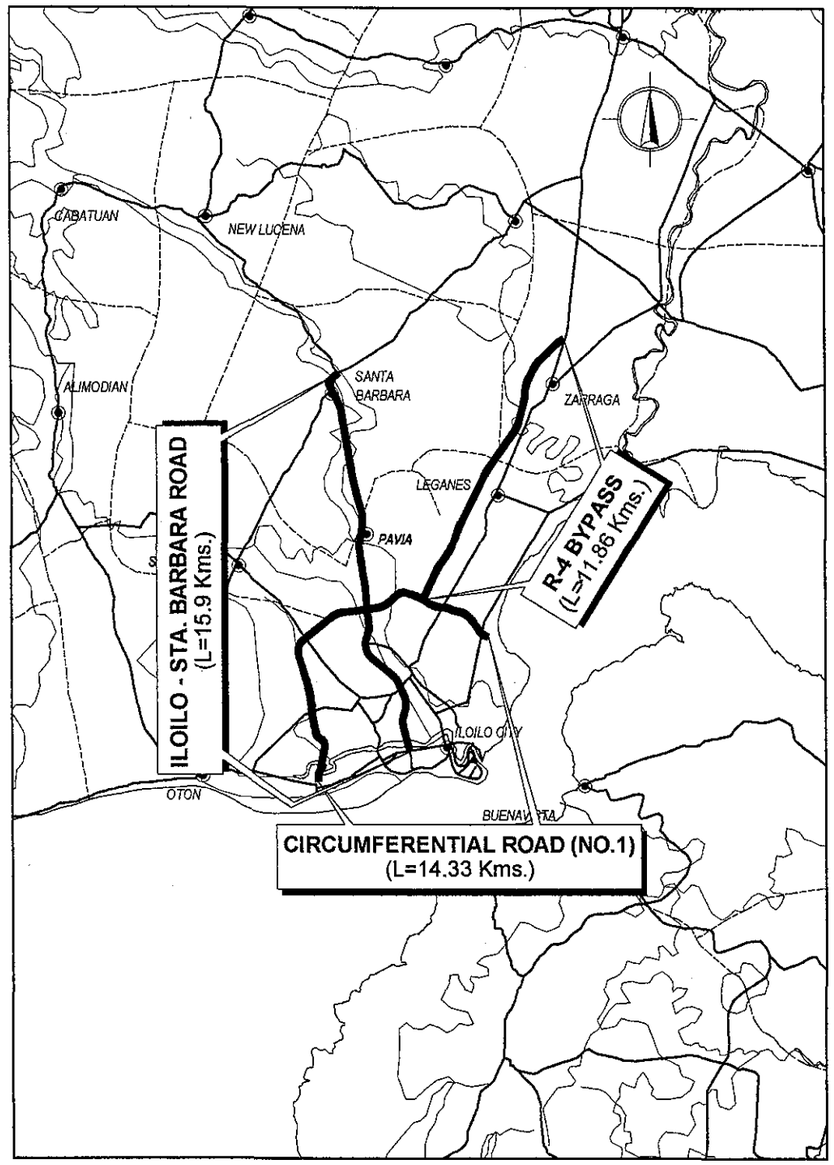
DRAWING NO. G-1

THE STUDY ON ROAD NETWORK IMPROVEMENT
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :	METRO ILOILO	DRAWING NO.
NOT TO SCALE	KEY MAP & VICINITY MAP	G-2



1 G-2 KEY MAP
NOT TO SCALE



2 G-2 VICINITY MAP
NOT TO SCALE

THE STUDY ON ROAD NETWORK IMPROVEMENT
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :	METRO ILOILO **LEGEND,SYMBOLS AND ABBREVIATIONS**	DRAWING NO. G-3

LEGEND & SYMBOLS

PROJECT ROAD		EXCAVATION	
SERVICE OR FRONTAGE ROAD ALONG BYPASS		SECTION IN WATER	
CONTOUR	5 6 7 6 5	SECTION IN EARTH	
RIGHT-OF-WAY LIMIT		SECTION IN CONCRETE	
POINT OF INTERSECTION		SECTION IN GRAVEL	
POINT OF INTERSECTION NO.	PI--00	SOFT BED MATERIALS TO BE EXCAVATED	
℄ OF PROJECT ROAD		NORTH SIGN	
FINISHED GRADE ON PROFILE	g=2.500%	LINE SYMMETRY	
ORIGINAL GROUND		SECTION TARGET	1B / D-03
BRIDGE	PLAN / PROFILE	ELEVATION TARGET	1A / D-04
SINGLE RC PIPE CULVERT	PLAN / PROFILE	TITLE TARGET	2 / RS-02 — IDENTIFICATION SYMBOL / SHEET NO.
DOUBLE RC PIPE CULVERT	PLAN / PROFILE	SUB-TITLE TARGET	2A / RS-02
BOX CULVERT	PLAN / PROFILE	DETAIL REF TARGET	2b / RI-05
DIRECTION OF FLOW		STATION GRID	162+000
EMBANKMENT			

ABBREVIATIONS

PCCP	PORTLAND CEMENT CONCRETE PAVEMENT	MO	MIDDLE ORDINATE
AC	ASPHALT CONCRETE PAVEMENT	g	GRADE IN PERCENT
GRA	GRAVEL	BM	BENCH MARK
PI	POINT OF HORIZONTAL INTERSECTION	TBM	TEMPORARY BENCH MARK
I	EXTERNAL ANGLE	MFL	MAXIMUM FLOOD LEVEL
D	DEGREE OF CURVE	OWL	ORDINARY WATER LEVEL
R	RADIUS OF CIRCULAR CURVE	DFL	DESIGN FLOW LEVEL
T	LENGTH OF TANGENCY	AZIM	AZIMUTH
Lc	LENGTH OF CIRCULAR CURVE	DIST	DISTANCE
E	EXTERNAL DISTANCE	e	SUPERELEVATION RATE IN %
PC	BEGINNING OF CIRCULAR CURVE	V	DESIGN SPEED IN KPH
PT	END OF CIRCULAR CURVE	EQ	EQUATION
PVI	POINT OF VERTICAL INTERSECTION	BK	BACK STATION
PVC	POINT OF VERTICAL CURVATURE	AH	AHEAD STATION
PVT	POINT OF VERTICAL TANGENCY	VERT	VERTICAL
LVC	LENGTH OF VERTICAL CURVE	HOR	HORIZONTAL
ø	DIAMETER	ELEV	ELEVATION
		℄	CENTER LINE

ILOILO CIRCUMFERENTIAL ROAD NO. 1

SUMMARY OF QUANTITIES

THE STUDY ON ROAD NETWORK IMPROVEMENT
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE : .

METRO ILOILO
SUMMARY OF QUANTITIES
ILOILO CIRCUMFERENTIAL ROAD NO. 1

DRAWING NO. G-4(1)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	PART C - EARTHWORK		
100(1)	CLEARING AND GRUBBING	ha.	31.9
102(1)	UNSUITABLE EXCAVATION	m^3	96,268.0
103(2)a	BRIDGE EXCAVATION, COMMON (AWL)	m^3	12,571.6
103(2)b	BRIDGE EXCAVATION, COMMON (BWL)	m^3	3,494.6
104(1)b	EMBANKMENT FROM BORROW	m^3	353,589.7
104(1)c	SELECTED BORROW FOR BACKFILLING	m^3	4,250.6
105(1)	SUBGRADE PREPARATION (COMMON MATERIAL!)	m^2	24,460.0
SPL 110	PLASTIC-BOARD DRAIN METHOD (@2.5m x 2.5m TRIANGLE, DEPTH 20.0m)	m^2	20,095.0
	PART D - SUBBASE AND BASE COURSE		
200	AGGREGATE SUBBASE COURSE	m^3	91,211.5
202	CRUSHED AGGREGATE BASE COURSE (AC)	m^3	29,703.4
	PART E - SURFACE COURSE		
301(1)	BITUMINUOUS PRIME COAT (MC-70 CUT-BACK ASPHALT)	t	185.5
302(2)	BITUMINOUS TACK COAT (EMULSIFIED ASPHALT GRADE SS-1)	t	61.8
310	BITUMINOUS CONCRETE SURFACE COURSE, HOT LAID	t	26,786.1
311(2)	PCC PAVEMENT(REINFORCED) FOR APPROACH SLAB, T=300mm	m2	450.0
	PART F - BRIDGE CONSTRUCTION		
400(4)	PRECAST CONCRETE PILES (0.45m×0.45m), FURNISHED AND DRIVEN	m	17,839.0
400(15)	TEST PILES (0.45m×0.45m)	m	823.0
400(19)	PILES SHOES FOR 0.45m×0.45m PILES	ea	564.0
401	CONCRETE RAILINGS	m	784.0
404(2)	REINFORCING STEEL, GRADE 60(fy = 415MPa)	kg	1,032,415.0
405(1)	STRUCTURAL CONCRETE CLASS "A1" FOR SUBSTRUCTURE(fc' = 24MPa)	m^3	2,999.3
405(2)	STRUCTURAL CONCRETE CLASS "A2" FOR SUPERSTRUCTURE(fc' = 24MPa)	m^3	2,232.0
405(6)	STRUCTURAL CONCRETE "LEAN CONCRETE" (fc' = 17MPa)	m^3	238.5
406(1)d	PRESTRESSED CONCRETE GIRDER, AASHTO TYPE IV-B, L = 26m	ea	20.0
406(1)h	PRESTRESSED CONCRETE GIRDER, AASHTO TYPE V, L = 31m	ea	15.0
407(1)a	ELASTOMERIC BEARING PAD, 400 x 350 x 60(DURO 60)	ea	40.0
407(1)b	ELASTOMERIC BEARING PAD, 550 x 350 x 60(DURO 60)	ea	10.0
407(2)	EXPANSION JOINT, 50mm GAP	m	101.7
407(4)	METAL DRAIN (φ150mm G.I. DRAIN PIPE)	m	120.0
	PART G - DRAINAGE AND SLOPE PROTECTION STRUCTURES		
500(1)b	REINFORCED CONCRETE PIPE CULVERT, 910mmφ (EXTRA STR.)	m	881.0
500(1)c	REINFORCED CONCRETE PIPE CULVERT, 1070mmφ (EXTRA STR.)	m	66.0
500(1)d	REINFORCED CONCRETE PIPE CULVERT, 1220mmφ (EXTRA STR.)	m	63.0
500(3)a3	REINFORCED CONCRETE BOX CULVERT 3-1.5m x 1.5m	m	15.0
502(2)b1	REINFORCED CONCRETE HEADWALL, 1-910mmφ RCPC	ea.	75.0
502(2)b2	REINFORCED CONCRETE HEADWALL, 2-910mmφ RCPC	ea.	14.0
502(2)c2	REINFORCED CONCRETE HEADWALL, 2-1070mmφ RCPC	ea.	4.0
502(2)d1	REINFORCED CONCRETE HEADWALL, 1-1220mmφ RCPC	ea.	2.0
502(2)d2	REINFORCED CONCRETE HEADWALL, 2-1220mmφ RCPC	ea.	2.0
502(10)a3	REINFORCED CONCRETE HEADWALL, BOX CULVERT 3-1.5m x 1.5m	ea.	2.0
502(3)b1	CATCH BASI FOR RCPC 1-φ910	ea.	1.0
504(5)	GROUTED RIPRAP, CLASS "A"	m^3	5,728.7
505(1)	STONE MASONRY	m^3	20.0
509	GABIONS	m^3	1,600.0
510	RUBBLE CONCRETE SLOPE PROTECTION, T = 350mm	m^3	898.0
511(a)	CONCRETE SIDE DICTH (0.5 x 0.5)	m	1,400.0
	PART H - MISCELLANEOUS STRUCTURES		
600(1)a	CONCRETE CURB, TYPE A (200x450mm)	m	1,642.0
600(3)a	COMBINATION CONCRETE CURB & GUTTER/SIDE STRIP, TYPE A (675x364mm	m	440.0
603(3)a	METAL GUARDRAIL	m	2,104.0
610	SODDING	m^2	105,312.8
SPL620(1)	TRAFFIC SIGNAL (3-LEG INTERSECTION)	ea.	2.0
SPL620(2)	TRAFFIC SIGNAL (4-LEG INTERSECTION)	ea.	4.0
SPL620(3)	OTHER MISCELLANEOUS (ROAD SIGNS,PAVEMENT STUD,ETC)	km	14.3

ILOILO STA. BARBARA ROAD

SUMMARY OF QUANTITIES

THE STUDY ON ROAD NETWORK IMPROVEMENT
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :

METRO ILOILO
SUMMARY OF QUANTITIES
ILOILO STA. BARBARA ROAD

DRAWING NO. G-4(2)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	PART C - EARTHWORK		
101(1)a	REMOVAL OF EXISTING CONCRETE RAILING	m3	294.0
101(1)b	REMOVAL OF EXISTING GROUTED RIPRAP	m3	595.0
102(1)	UNSUITABLE EXCAVATION	m3	100,317.7
103(2)a	BRIDGE EXCAVATION, COMMON (AWL)	m3	1,430.0
103(2)b	BRIDGE EXCAVATION, COMMON (BWL)	m3	2,150.4
104(1)b	EMBANKMENT FROM BORROW	m3	11,826.7
104(1)c	SELECTED BORROW FOR BACKFILLING	m3	800.0
105(1)	SUBGRADE PREPARATION (COMMON MATERIAL)	m2	126,037.4
	PART D - SUBBASE AND BASE COURSE		
200	AGGREGATE SUBBASE COURSE	m3	40,091.3
202	CRUSHED AGGREGATE BASE COURSE (AC)	m3	19,264.0
	PART E - SURFACE COURSE		
301(1)	BITUMINOUS PRIME COAT (MC-70 CUT-BACK ASPHALT)	t	144.5
302(2)	BITUMINOUS TACK COAT (EMULSIFIED ASPHALT GRADE SS-1)	t	48.2
310	BITUMINOUS CONCRETE SURFACE COURSE, HOT LAID	t	22,924.2
310(1)	PAVEMENT REHABILITATION/OVERLAY	t	21,549.5
311(1)a	PCC PAVEMENT(PLAIN) (T=0.10M)	m2	36,840.0
311(2)	PCC PAVEMENT(REINFORCED) FOR APPROACH SLAB, T=300MM	m2	320.0
	PART F - BRIDGE CONSTRUCTION		
400(4)	PRECAST CONCRETE PILES (0.45M×0.45M), FURNISHED AND DRIVEN	m	2,640.0
400(15)	TEST PILES (0.45M×0.45M)	m	264.0
400(19)	PILES SHOES FOR 0.45M×0.45M PILES	ea	144.0
401	CONCRETE RAILINGS	m	294.0
404(2)	REINFORCING STEEL, GRADE 60 (FY=415MPA)	kg	305,092.5
405(1)	STRUCTURAL CONCRETE CLASS"A1" FOR SUBSTRUCTURE (F'C=24MPA)	m3	796.4
405(2)	STRUCTURAL CONCRETE CLASS"A2" FOR SUPERSTRUCTURE (F'C=24MPA)	m3	632.1
405(6)	STRUCTURAL CONCRETE "LEAN CONCRETE" (F'C=17 MPA)	m3	69.6
407(2)	EXPANSION JOINT, 50MM GAP	m	205.2
407(4)	METAL DRAIN (Φ150MM G.I. DRAIN PIPE)	m	48.0
SPL	CARBON FIBER(2LAYERS)	m2	162.0

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	PART G - DRAINAGE AND SLOPE PROTECTION STRUCTURES		
500(1)a	REINFORCED CONCRETE PIPE CULVERT, 610MMΦ (EXTRA. STR.)	m	10,870.0
500(1)b	REINFORCED CONCRETE PIPE CULVERT, 910MMΦ (EXTRA. STR.)	m	76.0
500(1)c	REINFORCED CONCRETE PIPE CULVERT, 1070MMΦ (EXTRA. STR.)	m	2.0
500(1)d	REINFORCED CONCRETE PIPE CULVERT, 1220MMΦ (EXTRA. STR.)	m	72.0
500(3)a1	REINFORCED CONCRETE BOX CULVERT 1-1.5M X 1.5M	m	206.0
500(3)a2	REINFORCED CONCRETE BOX CULVERT 2-1.5M X 1.5M	m	75.0
500(3)b1	REINFORCED CONCRETE BOX CULVERT 1-2.4M X 2.4M	m	5.0
500(3)b2	REINFORCED CONCRETE BOX CULVERT 2-2.4M X 2.4M	m	202.0
500(3)b3	REINFORCED CONCRETE BOX CULVERT 3-2.4M X 2.4M	m	5.0
500(3)c2	REINFORCED CONCRETE BOX CULVERT 2-3.0M X 3.0M	m	19.0
502(2)b1	REINFORCED CONCRETE HEADWALL, 1-910MMΦ RCPC	ea.	8.0
502(2)b2	REINFORCED CONCRETE HEADWALL, 2-910MMΦ RCPC	ea.	2.0
502(2)c1	REINFORCED CONCRETE HEADWALL, 1-1070MMΦ RCPC	ea.	2.0
502(2)d1	REINFORCED CONCRETE HEADWALL, 1-1220MMΦ RCPC	ea.	2.0
502(2)d2	REINFORCED CONCRETE HEADWALL, 2-1220MMΦ RCPC	ea.	4.0
502(10)a1	REINFORCED CONCRETE HEADWALL, BOX CULVERT 1-1.5M X 1.5M	ea.	26.0
502(10)a2	REINFORCED CONCRETE HEADWALL, BOX CULVERT 2-1.5M X 1.5M	ea.	6.0
502(10)b1	REINFORCED CONCRETE HEADWALL, BOX CULVERT 1-2.4M X 2.4M	ea.	2.0
502(10)d1	REINFORCED CONCRETE HEADWALL, BOX CULVERT 2-4.0M X 2.5M	ea.	2.0
502(3)a1	CATCH BASIN FOR RCPC 1-Φ610	ea.	262.0
504(5)	GROUTED RIPRAP, CLASS "A"	m3	365.0
505(1)	STONE MASONRY	m3	4,514.5
505(2)	GRAVITY TYPE RETAINING WALL(H=1.0～ 1.5M)	m3	2,112.0
506	LOOSE BOULDER APRON 300MMΦMIN.,S.G=2.65	m3	68.4
509	GABIONS	m3	496.0
510	RUBBLE CONCRETE SLOPE PROTECTION, T = 350MM	m3	800.0
511(a)1	CONCRETE SIDE DITCH (0.5 X 0.5) WITH COVER	m	5,100.0
	PART H - MISCELLANEOUS STRUCTURES		
600(1)a	CONCRETE CURB, TYPE A (200X450MM)	m	10,077.0
600(1)c	CONCRETE CURB FOR EDGE OF SIDEWALK(200*500)	m	13,375.0
600(3)a	COMBINATION CONCRETE CURB & GUTTER/SIDE STRIP, TYPE A (675X364MM	m	13,000.0
603(3)a	METAL GUARDRAIL	m	1,400.0
SPL620(1)	TRAFFIC SIGNAL (3-LEG INTERSECTION)	ea.	2.0
SPL620(2)	TRAFFIC SIGNAL (4-LEG INTERSECTION)	ea.	3.0
	OTHER MISCELLANEOUS (ROAD SIGNS,PAVEMENT STUD,ETC)	km	13.1

ILOILO R-4 BYPASS

SUMMARY OF QUANTITIES

THE STUDY ON ROAD NETWORK IMPROVEMENT FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :

METRO ILOILO
SUMMARY OF QUANTITIES
ILOILO R-4 BYPASS

DRAWING NO. G-4(3)

Item No.	Description	Unit	Quantity
	PART C - EARTHW ORK		
100(1)	CLEARING AND GRUBBING	ha.	33.1
102(2)a	UNSUITABLE EXCAVATION	m^3	80 036.7
103(2)a	BRIDGE EXCAVATION, COMMON (AWL)	m^3	1 380.0
103(2)b	BRIDGE EXCAVATION, COMMON (BWL)	m^3	650.0
104(1)a	EMBANKMENT FROM BORROW	m^3	335 000.2
104(1)b	SELECTED BORROW FOR BACKFILLING	m^3	1 850.0
104(1)c	SUBGRADE PREPARATION (COMMON MATERIAL)	m^2	10 315.2
105(1)	PLASTIC-BOARD DRAIN METHOD (@2.5Mx2.5M TRIANGLE, DEPTH 20.0	m^2	68 290.0
	PART D - SUBBASE AND BASE COURSE		
200	AGGREGATE SUBBASE COURSE	m^3	72 349.2
202	CRUSHED AGGREGATE BASE COURSE (AC)	m^3	18 674.8
	PART E - SURFACE COURSE		
301(1)	BITUMINOUS PRIME COAT (MC-70 CUT-BACK ASPHALT)	ton	120.6
302(2)	BITUMINOUS TACK COAT (EMULSIFIED ASPHALT GRADE SS-1)	ton	40.2
310	BITUMINOUS CONCRETE SURFACE COURSE, HOT LAID	ton	18 245.9
311(2)	PCC PAVEMENT(REINFORCED) FOR APPROACH SLAB, T=300MM	m^2	409.0
400(4)	PRECAST CONCRETE PILES (0.45M×0.45M), FURNISHED AND DRIVEN	m	10 802.0
400(15)	TEST PILES (0.45M×0.45M)	m	392.0
400(19)	PILES SHOES FOR 0.45M×0.45M PILES	ea	444.0
401	CONCRETE RAILINGS	m	596.0
404(2)	REINFORCING STEEL, GRADE 60 (FY=415MPA)	kg	635 100.0
405(1)	STRUCTURAL CONC. CLASS"A1" FOR SUBSTRUCTURE (F'C=24MPA)	m^3	2 024.6
405(2)	STRUCTURAL CONC. CLASS"A2" FOR SUPERSTRUCTURE (F'C=24MPA	m^3	1 751.7
405(6)	STRUCTURAL CONCRETE "LEAN CONCRETE" (F'C=17 MPA)	m^3	139.1
406(1)f	PRESTRESSED CONCRETE GIRDER, AASHTO TYPE IV -B, L=28M	ea	18.0
407(1)a	ELASTOMERIC BEARING PAD, 400×350×60 (DURO 60)	ea	30.0
407(1)b	ELASTOMERIC BEARING PAD, 500×350×60 (DURO 60)	ea	12.0
407(2)	EXPANSION JOINT, 50MM GAP	m	101.0
407(4)	METAL DRAIN (Φ150MM G.I. DRAIN PIPE)	m	80.0

Item No.	Description	Unit	Quantity
	PART G - DRAINAGE AND SLOPE PROTECTION STRUCTURES		
500(1)b	REINFORCED CONCRETE PIPE CULVERT, 910MMΦ (EXTRA. STR.)	m	385.0
500(1)c	REINFORCED CONCRETE PIPE CULVERT, 1070MMΦ (EXTRA. STR.)	m	78.0
500(1)d	REINFORCED CONCRETE PIPE CULVERT, 1220MMΦ (EXTRA. STR.)	m	312.0
500(3)a3	REINFORCED CONCRETE BOX CULVERT 3-1.5M X 1.5M	m	72.0
500(3)b2	REINFORCED CONCRETE BOX CULVERT 2-2.4M X 2.4M	m	14.0
500(3)b3	REINFORCED CONCRETE BOX CULVERT 3-2.4M X 2.4M	m	28.0
500(3)c3	REINFORCED CONCRETE BOX CULVERT 3-3.0M X 3.0M	m	39.0
502(2)b1	REINFORCED CONCRETE HEADWALL, 1-910MMΦ RCPC	ea.	36.0
502(2)b2	REINFORCED CONCRETE HEADWALL, 2-910MMΦ RCPC	ea.	6.0
502(2)c1	REINFORCED CONCRETE HEADWALL, 1-1070MMΦ RCPC	ea.	2.0
502(2)c2	REINFORCED CONCRETE HEADWALL, 2-1070MMΦ RCPC	ea.	4.0
502(2)d1	REINFORCED CONCRETE HEADWALL, 1-1220MMΦ RCPC	ea.	4.0
502(2)d2	REINFORCED CONCRETE HEADWALL, 2-1220MMΦ RCPC	ea.	18.0
502(10)a3	REINFORCED CONCRETE HEADWALL, BOX CULVERT 3-1.5M X 1.5M	ea.	10.0
502(10)b2	REINFORCED CONCRETE HEADWALL, BOX CULVERT 2-2.4M X 2.4M	ea.	2.0
502(10)b3	REINFORCED CONCRETE HEADWALL, BOX CULVERT 3-2.4M X 2.4M	ea.	4.0
502(10)c3	REINFORCED CONCRETE HEADWALL, BOX CULVERT 3-3.0M X 3.0M	ea.	4.0
504(5)	GROUTED RIPRAP, CLASS "A"	m3	7 622.3
505(1)	STONE MASONRY	m3	10.0
505(2)	GRAVITY TYPE RETAINING WALL(H=1.0～ 1.5M)	m3	1.0
509	GABIONS	m3	300.0
510	RUBBLE CONCRETE SLOPE PROTECTION, T = 350MM	m3	296.4
	PART H - MISCELLANEOUS STRUCTURES		
600(1)a	CONCRETE CURB, TYPE A (200X450MM)	m	1 512.0
603(3)a	METAL GUARDRAIL	m	3 100.0
610	SODDING	m^2	105 915.6
SPL620(3)	TRAFFIC SIGNAL (3-LEG INTERSECTION)	ea.	2.0
SPL620(1)	OTHER MISCELLANEOUS (ROAD SIGNS,PAVEMENT STUD,ETC)	km	11.9

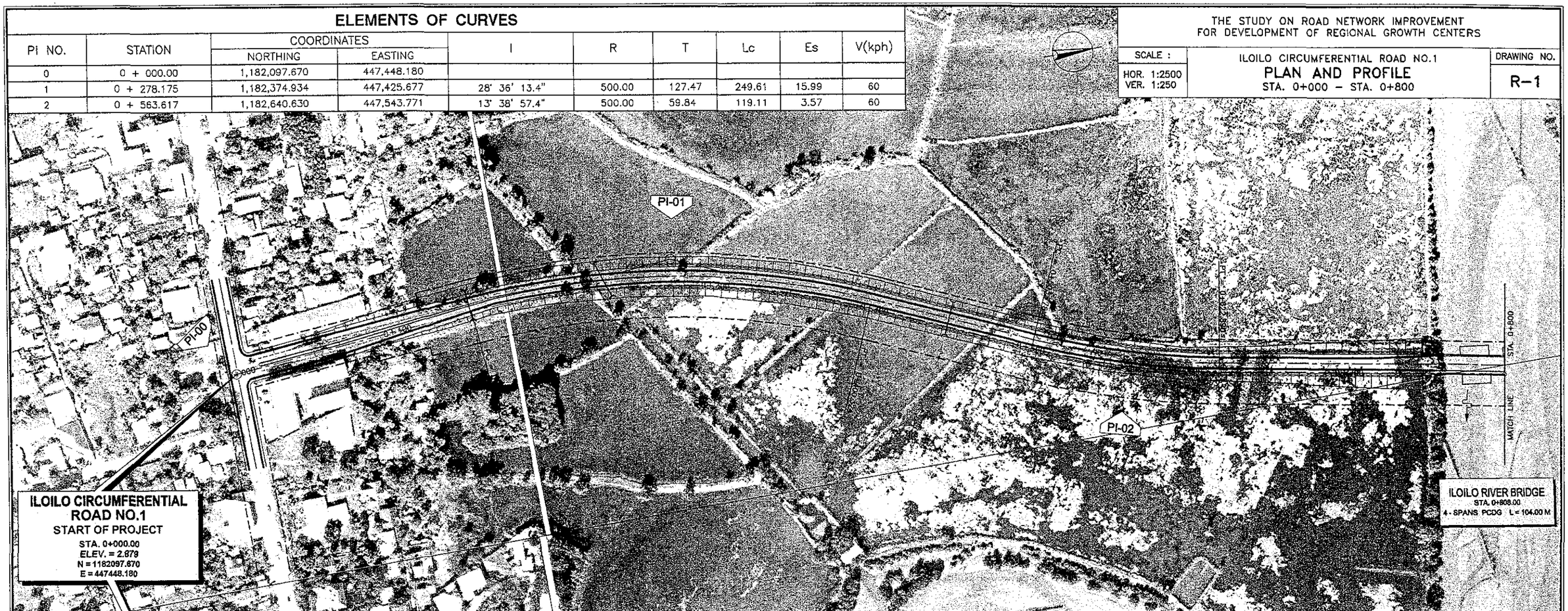
ILOILO CIRCUMFERENTIAL ROAD NO. 1 (C-1)

ELEMENTS OF CURVES

PI NO.	STATION	COORDINATES NORTHING	COORDINATES EASTING	I	R	T	Lc	Es	V(kph)
0	0 + 000.00	1,182,097.670	447,448.180						
1	0 + 278.175	1,182,374.934	447,425.677	28° 36' 13.4"	500.00	127.47	249.61	15.99	60
2	0 + 563.617	1,182,640.630	447,543.771	13° 38' 57.4"	500.00	59.84	119.11	3.57	60

THE STUDY ON ROAD NETWORK IMPROVEMENT
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :	ILOILO CIRCUMFERENTIAL ROAD NO.1	DRAWING NO.
HOR. 1:2500 VER. 1:250	**PLAN AND PROFILE** STA. 0+000 – STA. 0+800	R–1



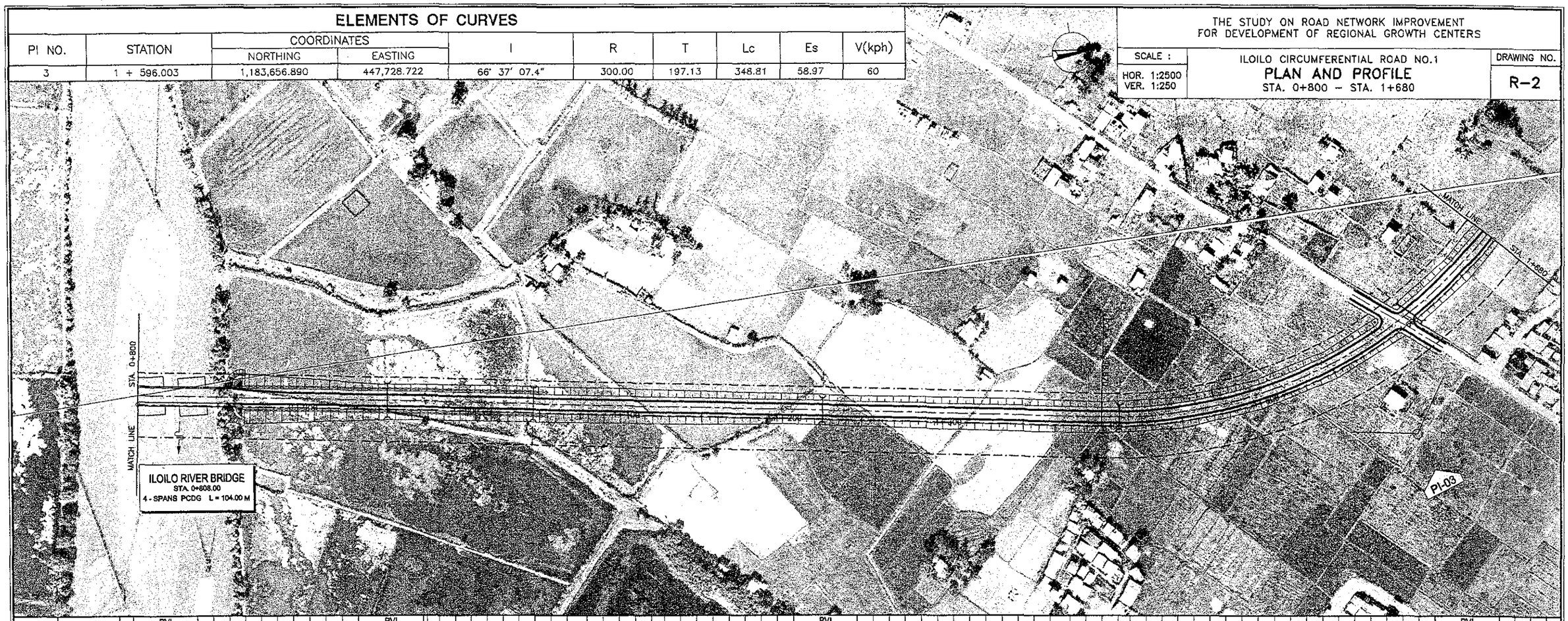
STATION	0+000	0+100	0+200	0+300	0+400	0+500	0+600	0+700	0+800
FINISHED GRADE	2.879	3.054	3.229	3.404	3.579	3.754	3.929	4.011	3.857	3.681	3.504	3.328	3.279	3.887	5.080	6.282	6.832
ORIGINAL GROUND	2.88	2.55	2.53	2.19	2.21	0.64	0.80	0.70	0.70	0.75	0.87	0.98	0.79	0.90	0.94	1.05	-1.25
HORIZONTAL CURVATURE	R = ∝	PI – 1	R = 500	R = ∝	PI – 2	R = 500	R = ∝										
VERTICAL CURVATURE	g = +0.350 % L = 340.00 m				g = -0.353 % L = 280.00 m			g = +2.500 % L = 188.00 m									

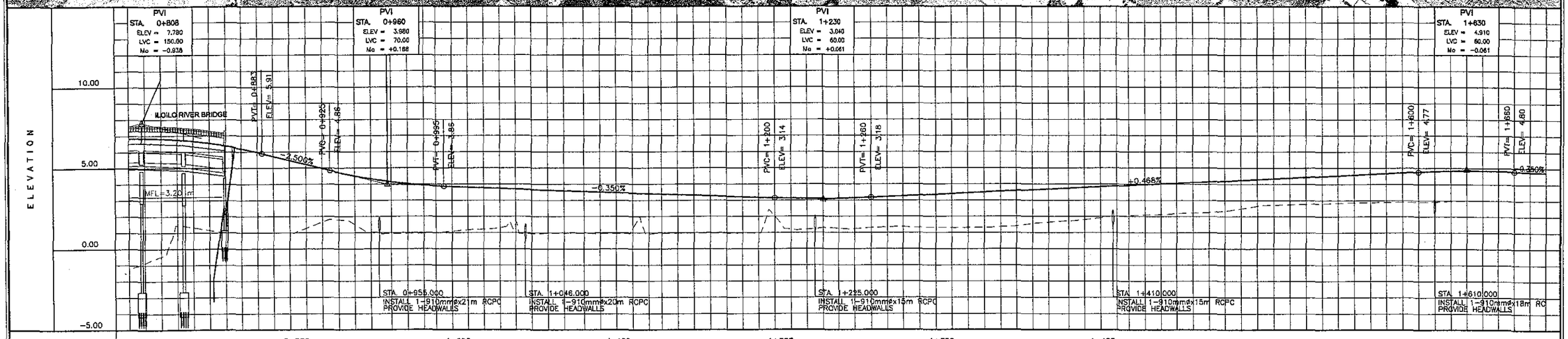
ELEMENTS OF CURVES

PI NO.	STATION	COORDINATES		I	R	T	Lc	Es	V(kph)
		NORTHING	EASTING						
3	1 + 596.003	1,183,656.890	447,728.722	66° 37' 07.4"	300.00	197.13	348.81	58.97	60

THE STUDY ON ROAD NETWORK IMPROVEMENT
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :	ILOILO CIRCUMFERENTIAL ROAD NO.1	DRAWING NO.
HOR. 1:2500 VER. 1:250	**PLAN AND PROFILE** STA. 0+800 – STA. 1+680	R–2





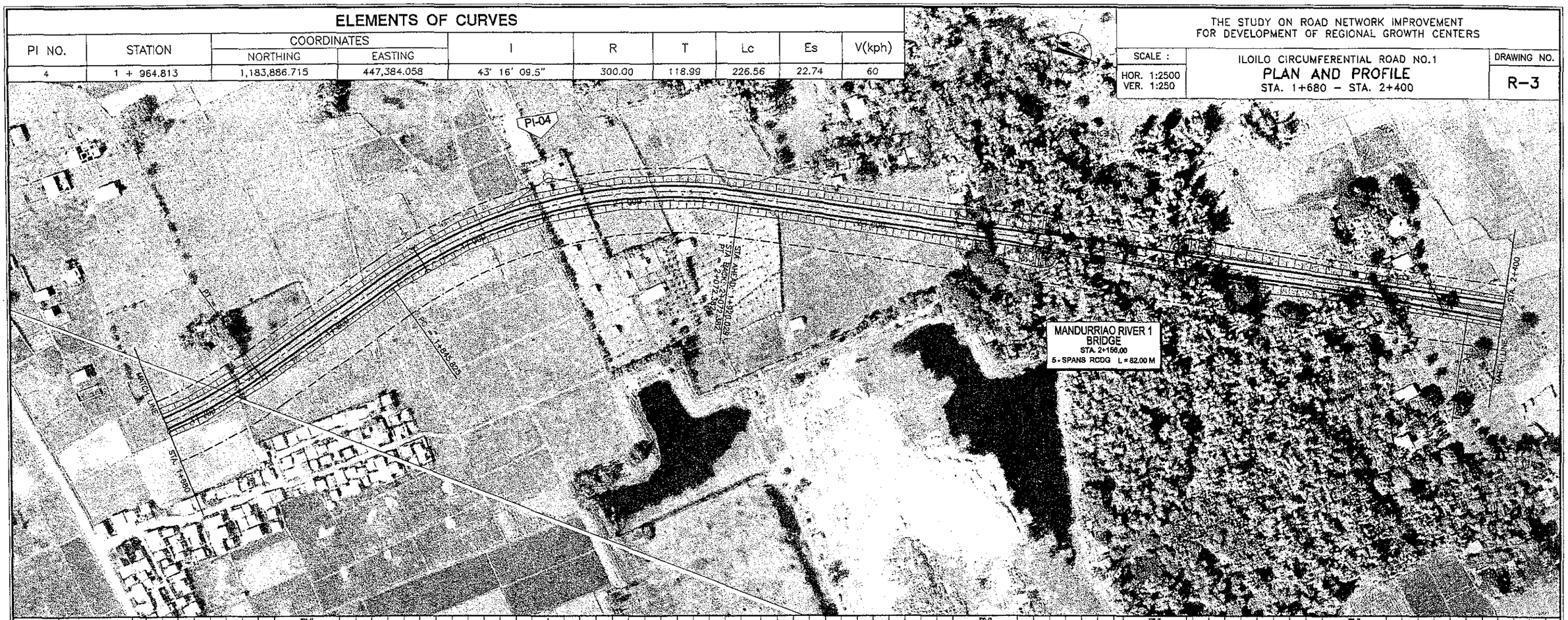
STATION	0+800	0+900	1+000	1+100	1+200	1+300	1+400	1+500	1+600	1+680
FINISHED GRADE	6.832	6.549	5.480	4.326	3.840	3.665	3.490	3.315	3.140	3.136	3.363	3.597	3.831	4.065	4.299	4.533	4.767	4.830
ORIGINAL GROUND	−1.25	1.16	0.99	1.02	1.08	0.95	0.95	0.97	2.01	1.23	1.32	1.41	1.90	2.19	2.65	2.83	2.91	2.99
HORIZONTAL CURVATURE	R = ∞ — PI − 3																	
VERTICAL CURVATURE	g = −2.500 % L = 152.00 m			g = −0.350 % L = 270.00 m			g = +0.468 % L = 400.00 m										g=−0.350 % L=150.00 m	

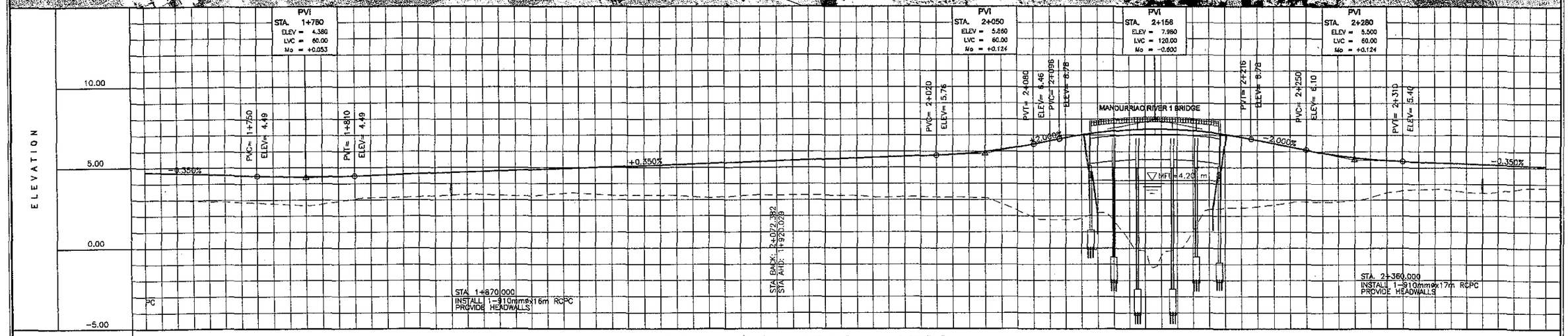
ELEMENTS OF CURVES

PI NO.	STATION	COORDINATES		I	R	T	Lc	Es	V(kph)
		NORTHING	EASTING						
4	1 + 964.813	1,183,886.715	447,384.058	43° 16' 09.5"	300.00	118.99	226.56	22.74	60

THE STUDY ON ROAD NETWORK IMPROVEMENT
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :	ILOILO CIRCUMFERENTIAL ROAD NO.1	DRAWING NO.
HOR. 1:2500 VER. 1:250	PLAN AND PROFILE STA. 1+680 – STA. 2+400	R-3





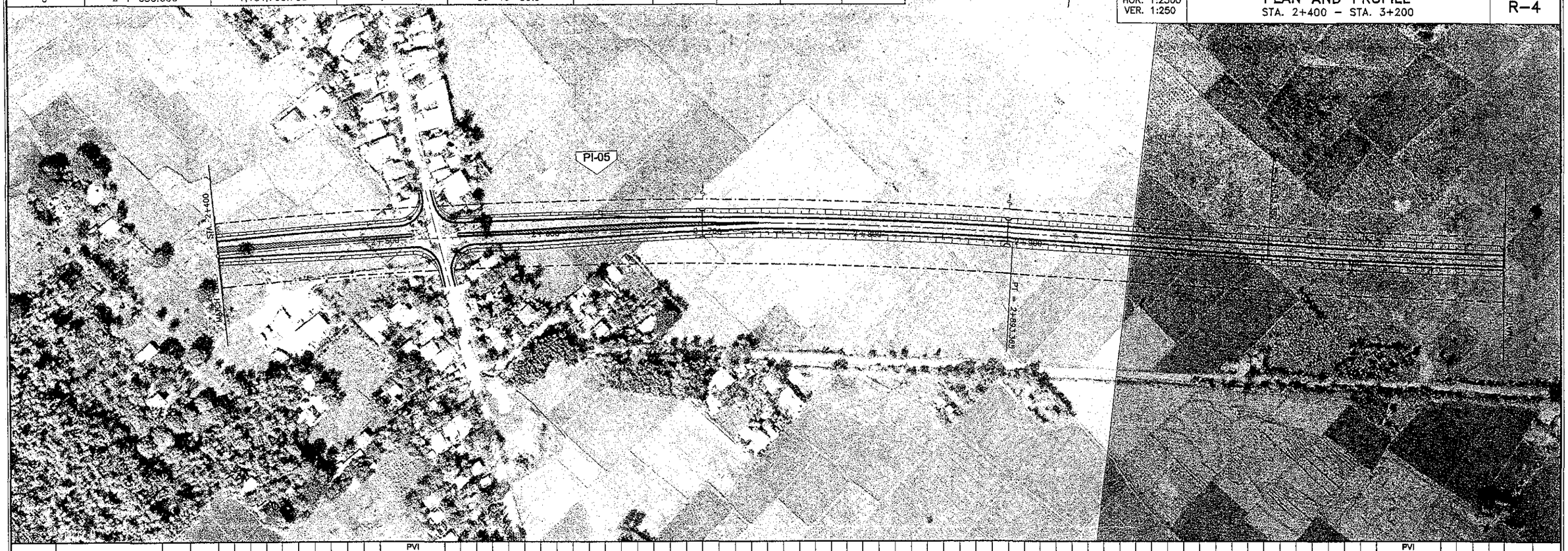
STATION	1+680	1+700	1+800	1+900	2+000 "BK"	2+050 "BK"	1+950 "AH"	2+000 "AH"	2+100	2+200	2+300	2+400
FINISHED GRADE	4.662	4.487	4.458	4.627	4.802	4.977	5.152	5.327	5.510	5.685	5.984	6.858	7.374	7.058	6.100	5.444	5.255	5.080
ORIGINAL GROUND	2.98	2.81	2.90	3.18	3.28	3.40	3.26	3.24	3.28	3.18	3.10	1.75	-0.20	2.48	2.88	3.44	3.48	3.75
HORIZONTAL CURVATURE	R = 300		R = ∞	PI - 4		R = 300			R = ∞			PI-5
VERTICAL CURVATURE	g = -0.350 % L = 150.00 m		g = +0.350 % L = 422.35 m				g = +2.000 % L = 106.00 m		g = -2.000 % L = 124.00 m		g = -0.350 % L = 240.00 m	

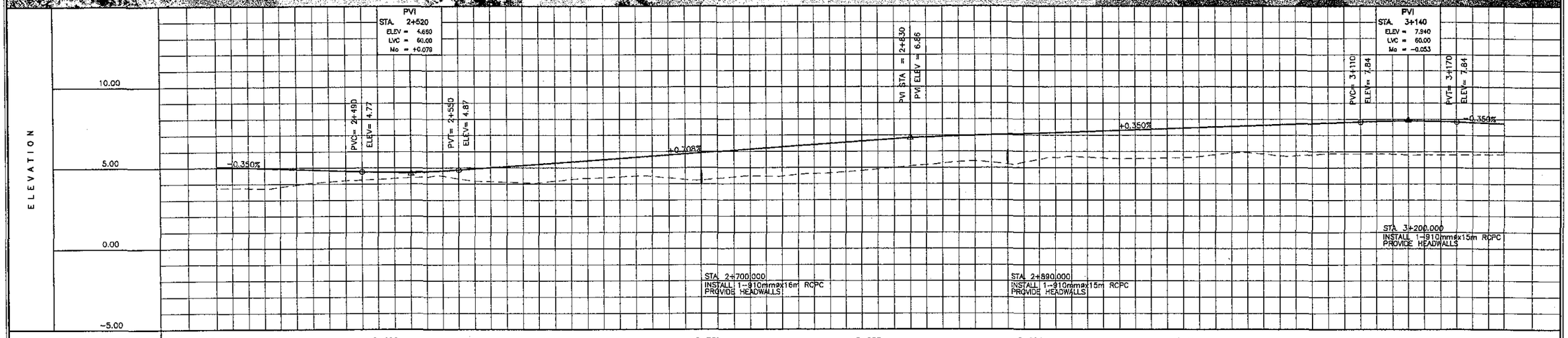
ELEMENTS OF CURVES

PI NO.	STATION	COORDINATES		I	R	T	Lc	Es	V(kph)
		NORTHING	EASTING						
5	2 + 636.606	1,184,700.750	447,195.600	09° 49' 53.9"	3000.00	258.03	514.78	11.08	60

THE STUDY ON ROAD NETWORK IMPROVEMENT
FOR DEVELOPMENT OF REGIONAL GROWTH CENTERS

SCALE :	ILOILO CIRCUMFERENTIAL ROAD NO.1	DRAWING NO.
HOR. 1:2500 VER. 1:250	PLAN AND PROFILE STA. 2+400 – STA. 3+200	R–4





STATION	2+400	2+500	2+600	2+700	2+800	2+900	3+000	3+100	3+200
FINISHED GRADE	5.080	4.905	4.739	4.873	5.227	5.581	5.935	6.289	6.643	6.925	7.100	7.275	7.450	7.625	7.800	7.882	7.730
ORIGINAL GROUND	3.75	3.95	4.30	4.32	4.07	4.44	4.23	4.49	4.82	5.28	5.33	5.60	5.63	5.85	5.86	5.80	5.83
HORIZONTAL CURVATURE	R = 3000						R = ∞									Pi – 6	
VERTICAL CURVATURE	g = -0.350 % L = 240.00 m			g = +0.708 % L = 310.00 m			g = +0.350 % L = 310.00 m									g = -0.350 % L = 110.00 m	