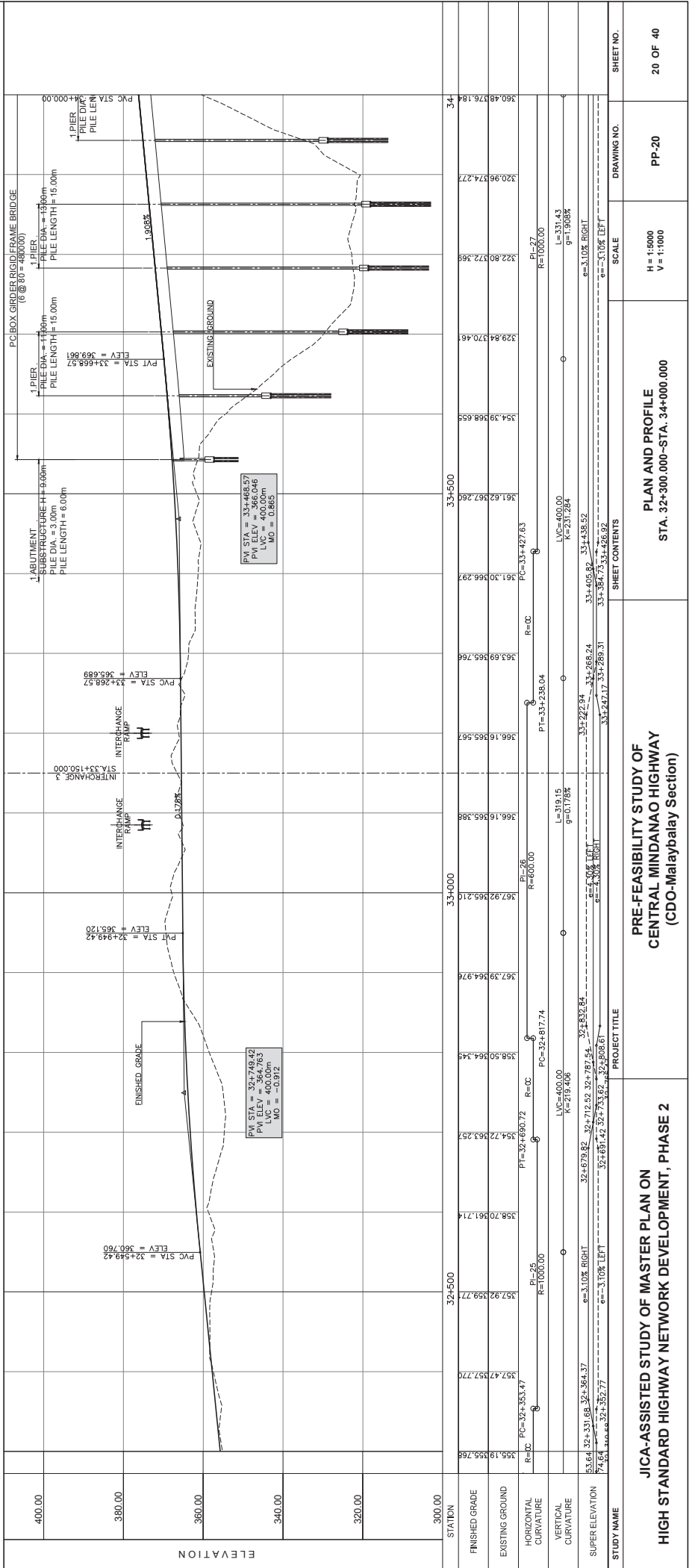
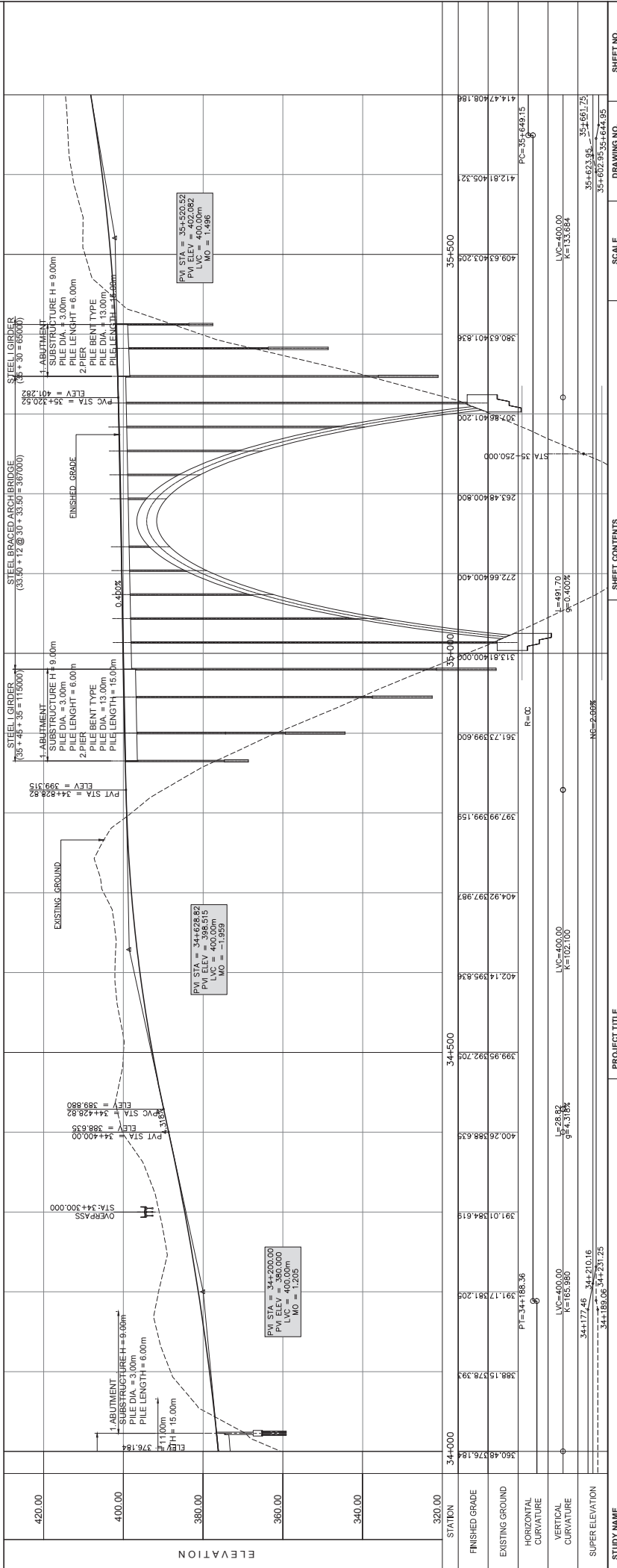
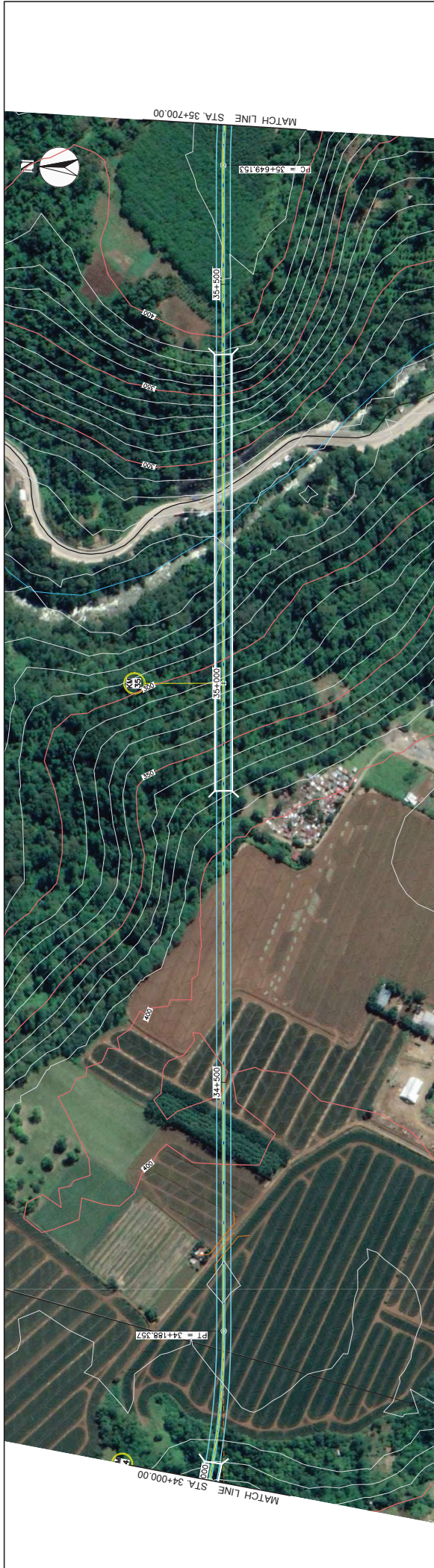
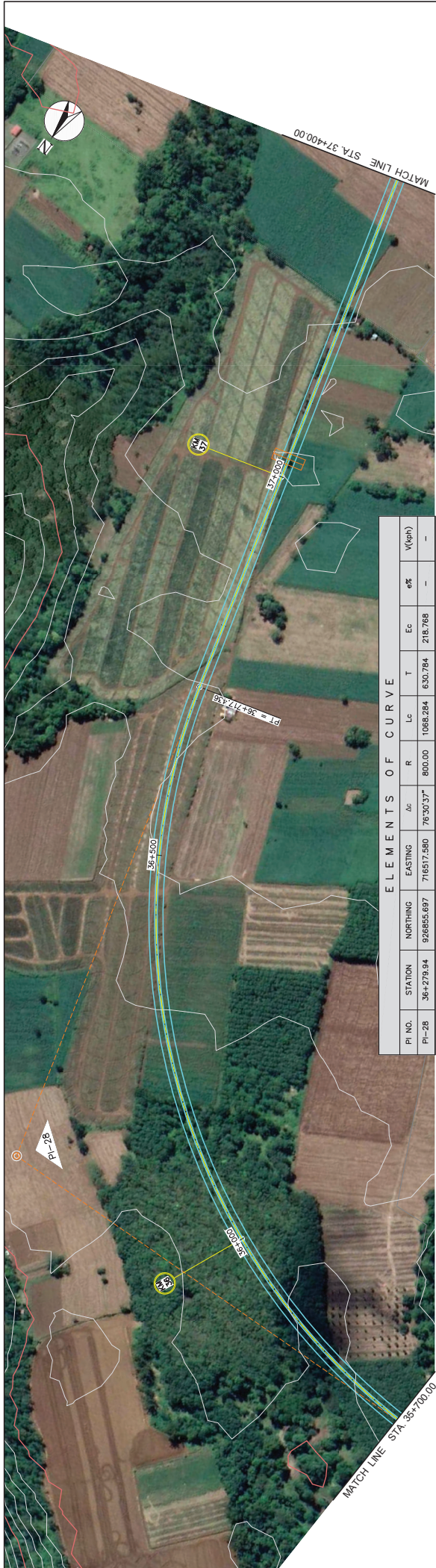


ELEMENTS OF CURVE									
PI NO.	STATION	NORTHING	EASTING	$\Delta\alpha$	R	Lc	T	Ec	$e\%$
PI-25	32+523.72	977335.932	712908.871	19°19'22"	1000.00	337.247	170.240	14.387	-
PI-26	33+036.93	977320.372	713425.084	40°08'11"	600.00	420.306	219.190	38.784	-
PI-27	33+827.46	926780.747	714027.291	43°35'12"	1000.00	760.732	399.837	76.973	-

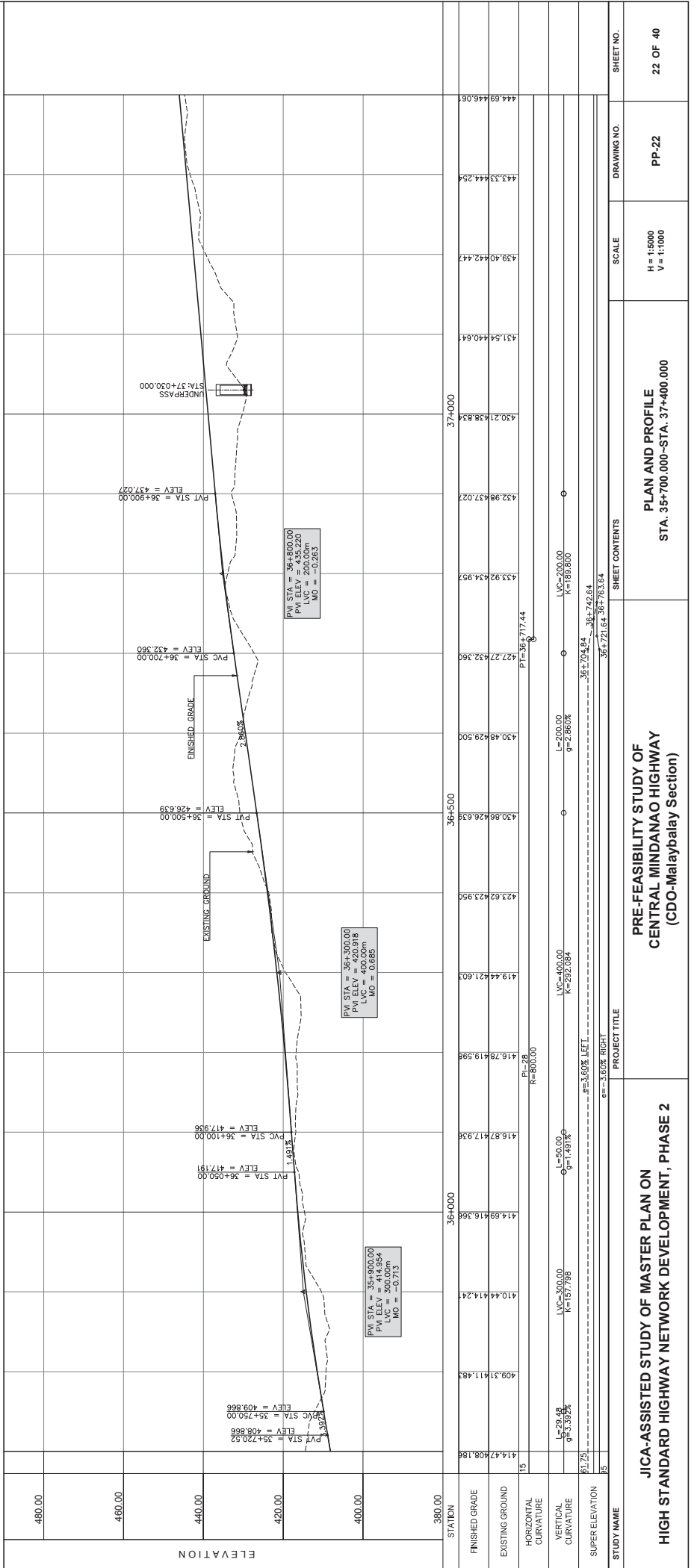


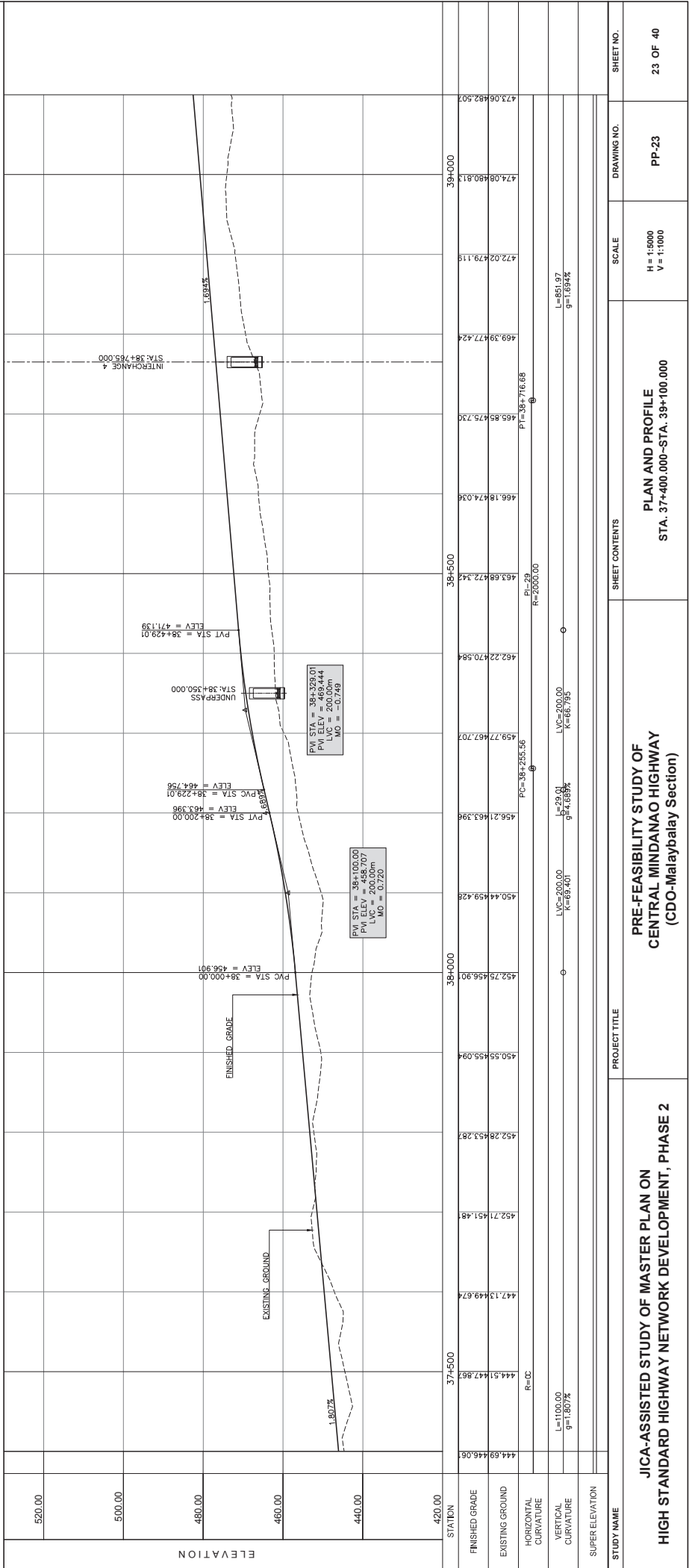


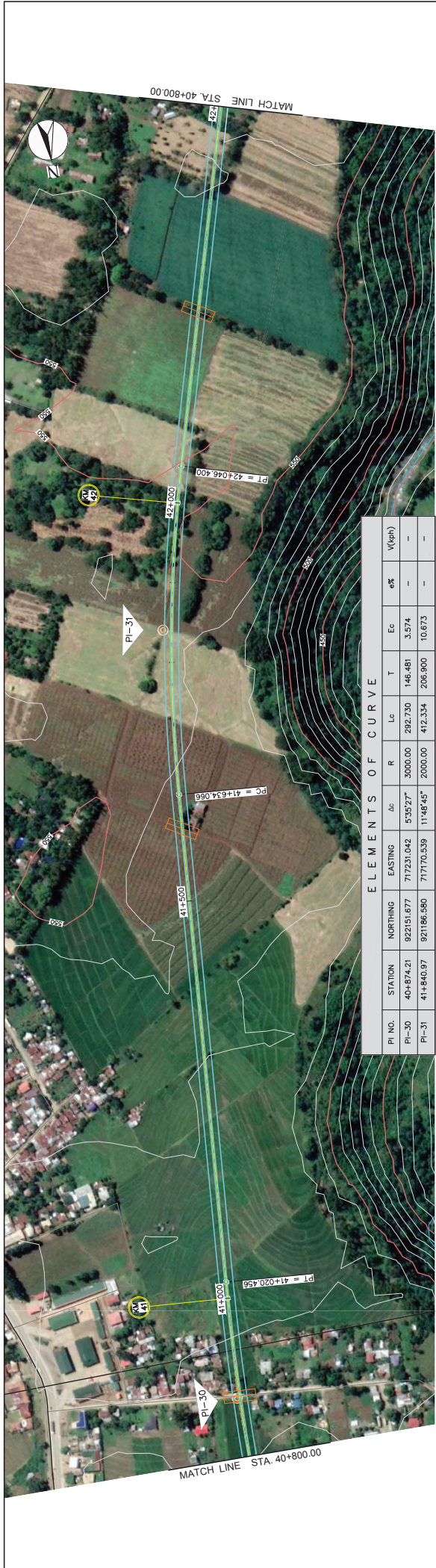
STUDY NAME	PROJECT TITLE	SHEET CONTENTS	SCALE	DRAWING NO.	SHEET NO.
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2	PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)	PLAN AND PROFILE STA. 34+000.000-STA. 35+700.000	H = 1:5000 V = 1:1000	PP-21	21 OF 40



ELEMENTS OF CURVE										
PI NO.	STATION	NORTHING	EASTING	ΔC	R	Lc	T	Ec	ϕ	V(kph)
PI-28	36+279.84	92855.697	71657.580	76°30'37"	800.00	1088.284	630.784	218.768	—	—
PI-29	36+700.00	92855.697	71657.580	76°30'37"	800.00	1088.284	630.784	218.768	—	—

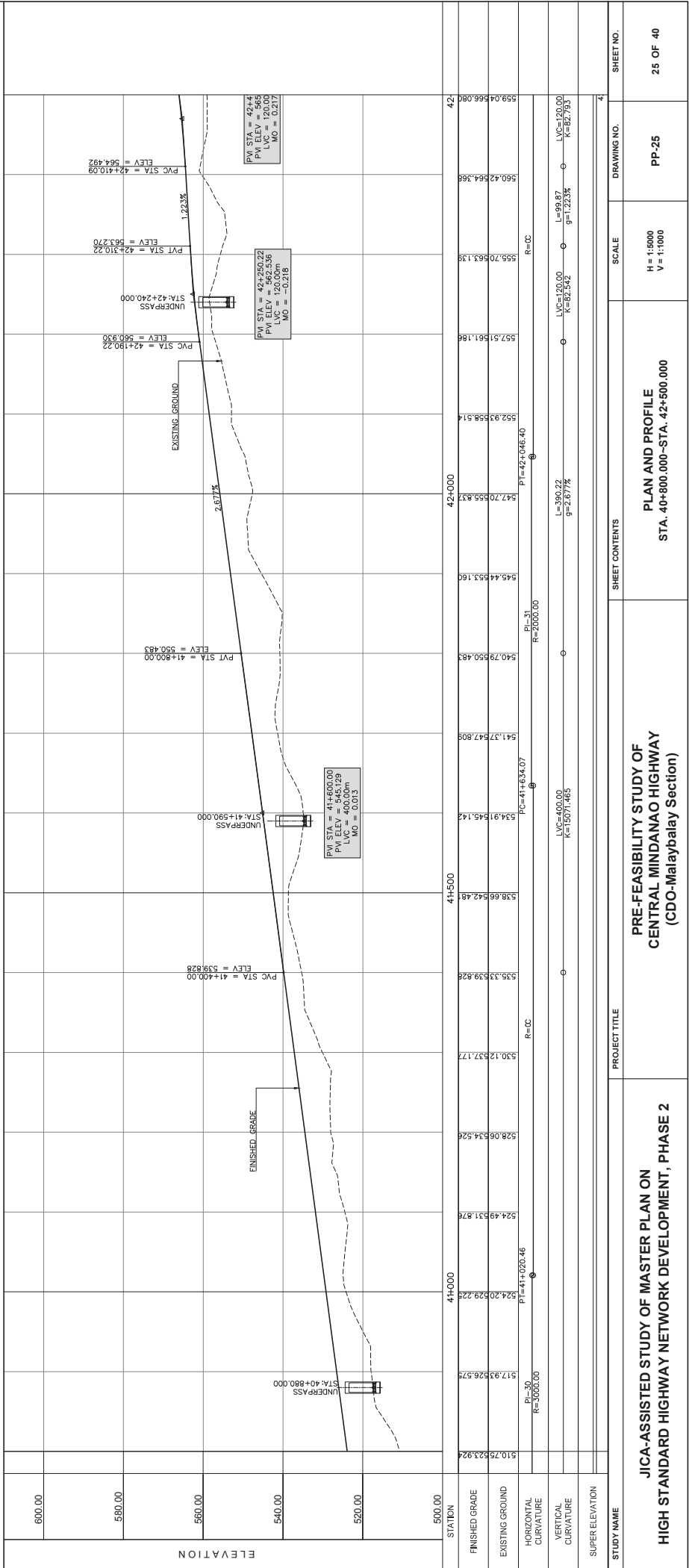




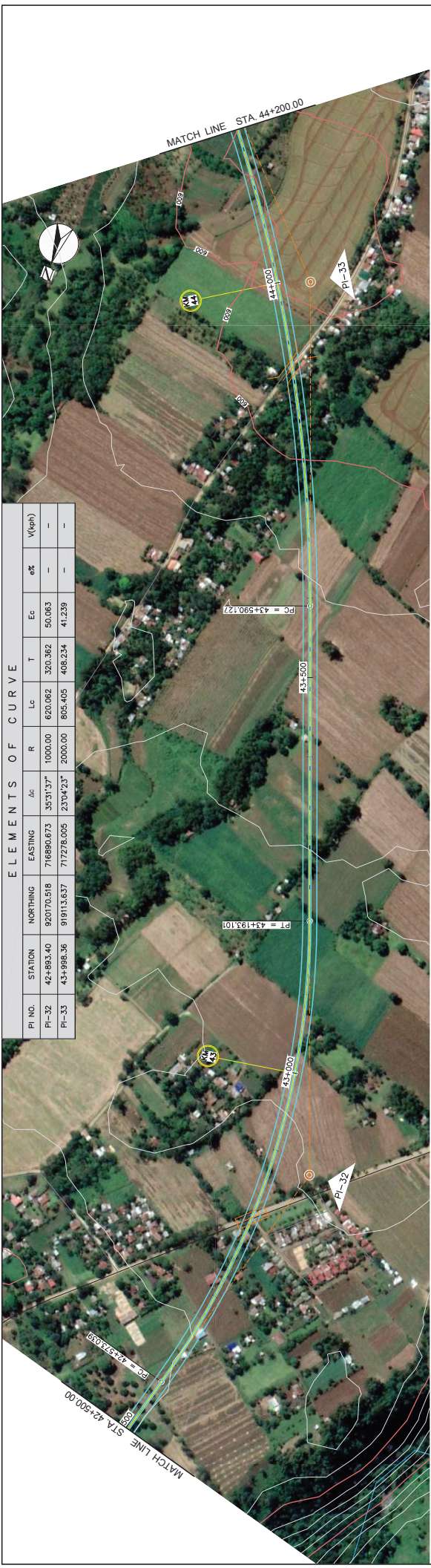


ELEMENTS OF CURVE

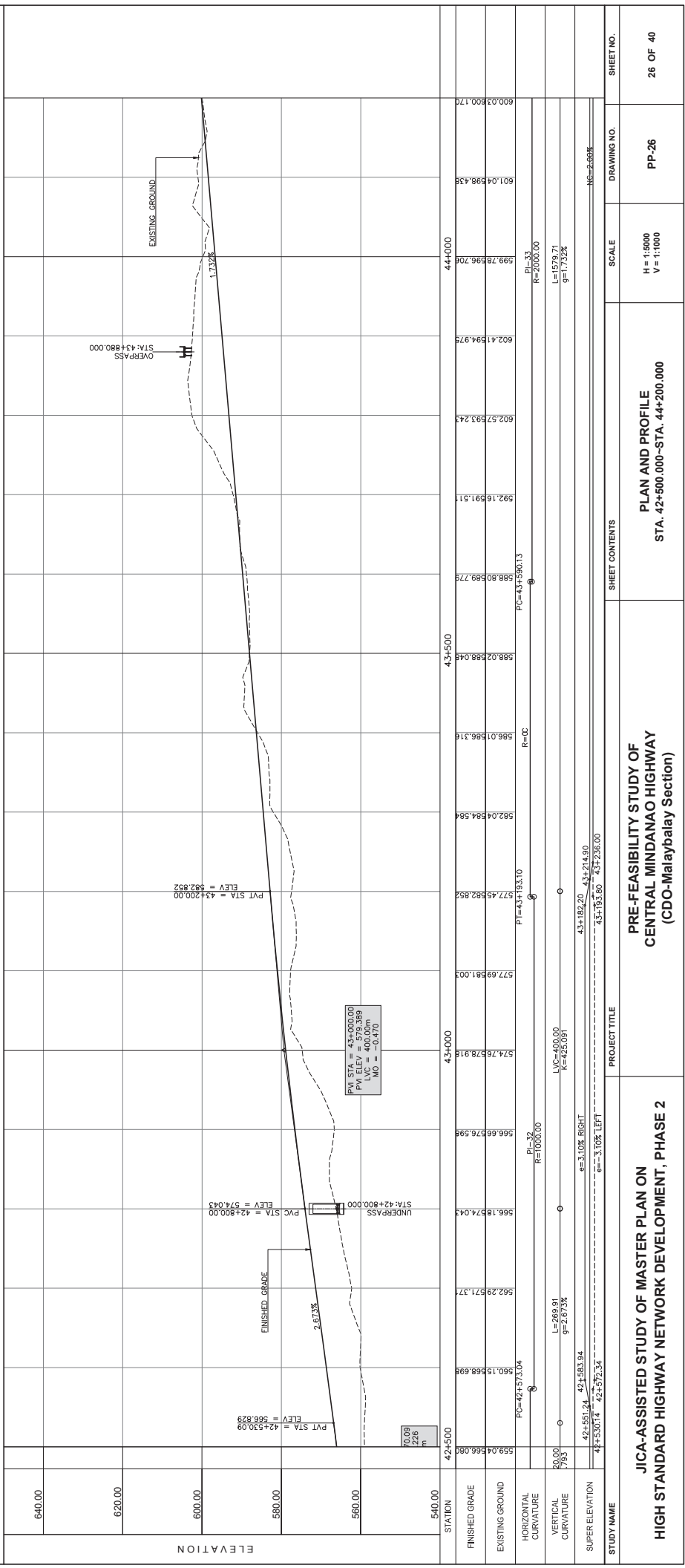
PI NO.	STATION	NORTHING	EASTING	Δc	R	Lc	T	Ec	e%	V(veh)
PI-30	40+874.21	922151.677	717231.042	5°35'23"	3000.00	282.730	146.481	3.574	-	-
PI-31	41+840.97	921865.580	717170.539	11°48'45"	2000.00	412.334	206.900	10.673	-	-



STUDY NAME		PROJECT TITLE		SHEET CONTENTS		SCALE		DRAWING NO.		SHEET NO.	
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2		PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)		PLAN AND PROFILE STA. 40+800.00-STA. 42+500.000		H = 1:5000 V = 1:1000		PP-25		25 OF 40	



ELEMENTS OF CURVE										
PI NO.	STATION	NORTHING	EASTING	Δα	R	Lc	T	Ec	e%	V(dph)
PI-32	42+883.40	9207.0218	716890.673	35°31'37"	1000.00	620.062	320.362	50.063	-	-
PI-33	43+988.36	919113.637	717278.005	23°44'23"	2000.00	805.405	408.234	41.239	-	-



STATION	640.00	620.00	600.00	580.00	560.00	540.00
FINISHED GRADE	600.03	601.04	602.41	602.57	592.16	588.02
EXISTING GROUND	600.03	598.43	594.97	593.24	591.51	588.04
HORIZONTAL CURVATURE						
VERTICAL CURVATURE						
SUPER ELEVATION						

STUDY NAME
 JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2

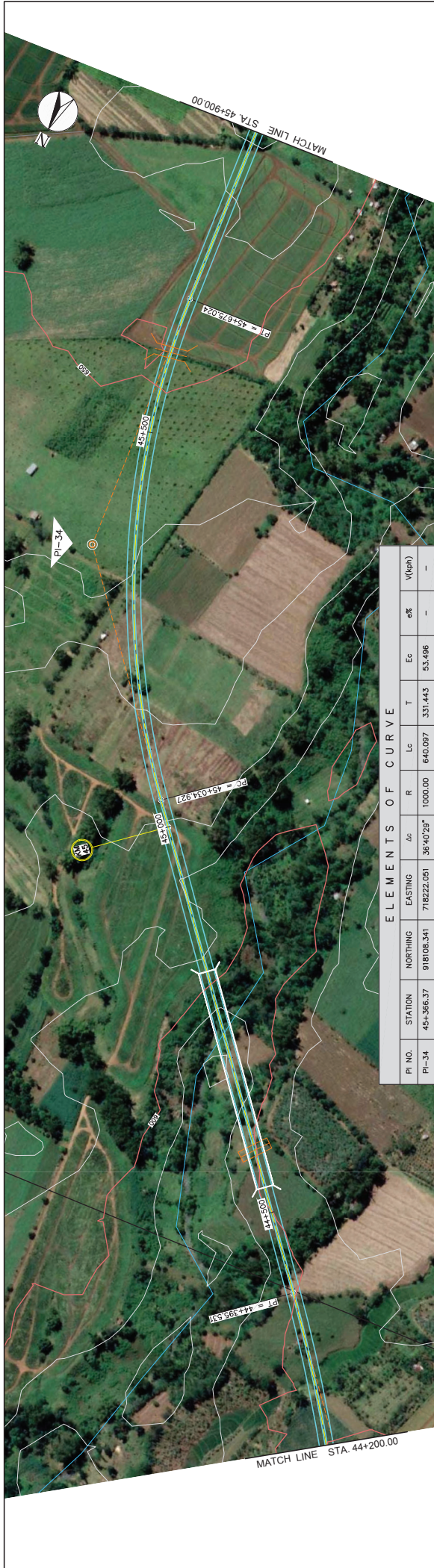
PROJECT TITLE
 PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)

SHEET CONTENTS
 PLAN AND PROFILE
 STA. 42+500.000-STA. 44+200.000

SCALE
 H = 1:5000
 V = 1:1000

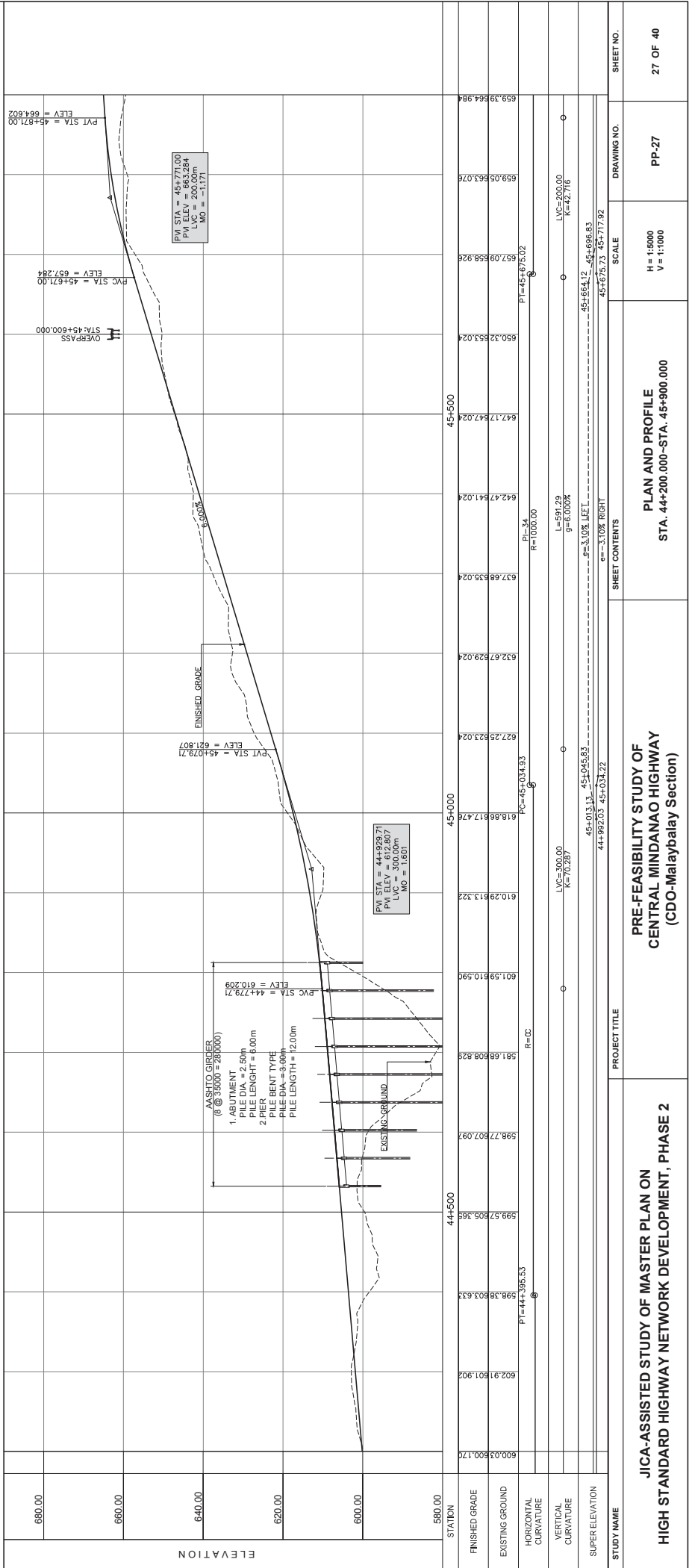
DRAWING NO.
 PP-26

SHEET NO.
 26 OF 40



ELEMENTS OF CURVE

PI NO.	STATION	NORTHING	EASTING	$\Delta\alpha$	$\Delta\alpha$	R	Lc	T	Eg	e%	V(eph)
PI-34	45+565.37	918108.341	718222.051	36+029*	1000.00	640.097	331.443	53.496	—	—	—



PVI STA = 45+771.00
 PILEV = 664.004
 LVC = 200.00
 MO = -1.171

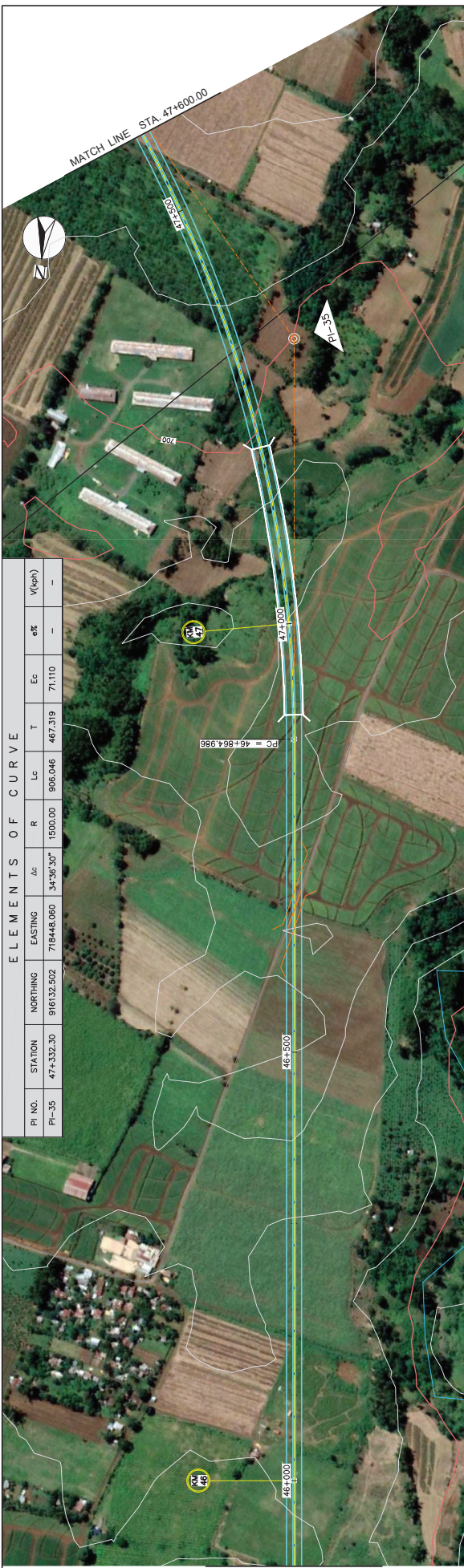
PVI STA = 45+079.71
 ELEV = 621.807

PVI STA = 44+929.71
 PILEV = 626.07
 LVC = 300.00
 MO = 1.601

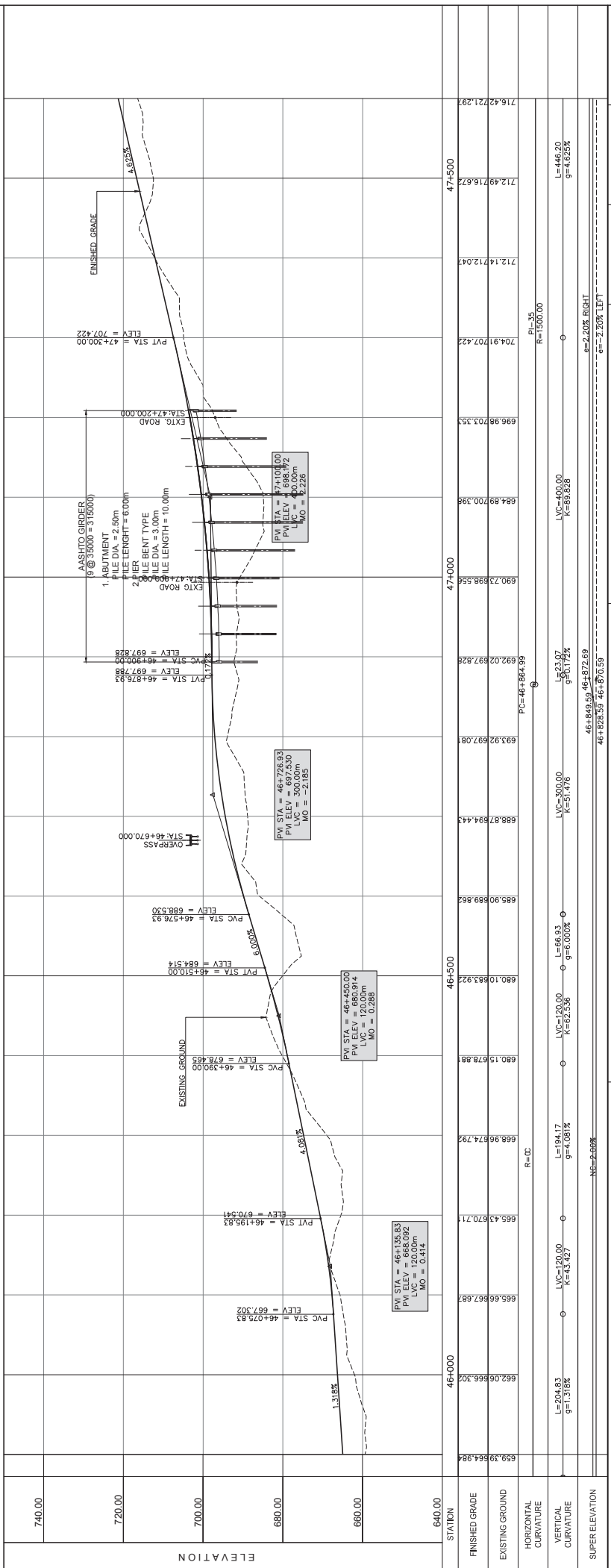
ASHTO GIBBER
 (8 @ 3500 = 28000)

1. ABUTMENT
 PILE DIA. = 2.50m
 PILE LENGTH = 6.00m

2. PIER
 PILE BENT TYPE
 PILE DIA. = 3.00m
 PILE LENGTH = 12.00m



ELEMENTS OF CURVE						
PI NO.	STATION	NORTHING	EASTING	$\Delta\alpha$	R	Lc
PI-35	47+332.30	916132.502	718446.060	34°36'30"	1500.00	906.046



STATION	740.00	720.00	700.00	680.00	660.00	640.00
FINISHED GRADE	716.42	712.49	707.42	703.35	698.98	697.29
EXISTING GROUND	712.14	712.04	709.91	700.39	692.73	689.56
HORIZONTAL CURVATURE	R=GC					
VERTICAL CURVATURE	L=204.83 g=1.318%	L=194.17 g=4.081%	L=120.00 K=62.536	L=66.83 K=51.476	L=300.00 K=60.00%	L=446.20 g=4.625%
SUPER ELEVATION	NG=2.00%					

STUDY NAME: JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2

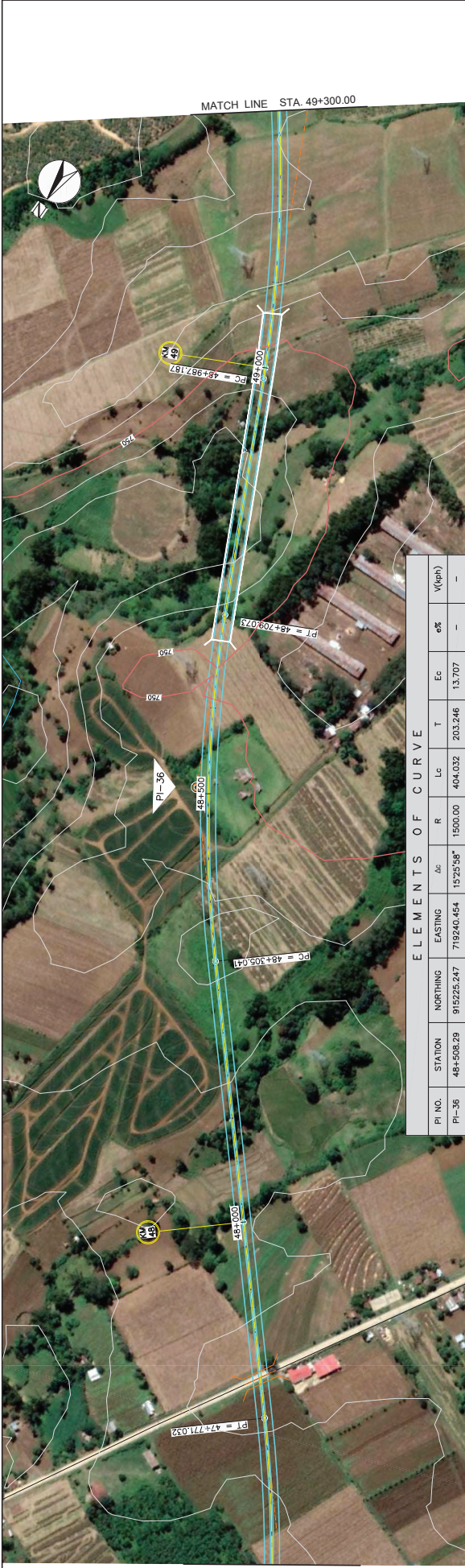
PROJECT TITLE: PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)

SHEET CONTENTS: PLAN AND PROFILE STA. 45+900.00-STA. 47+600.00

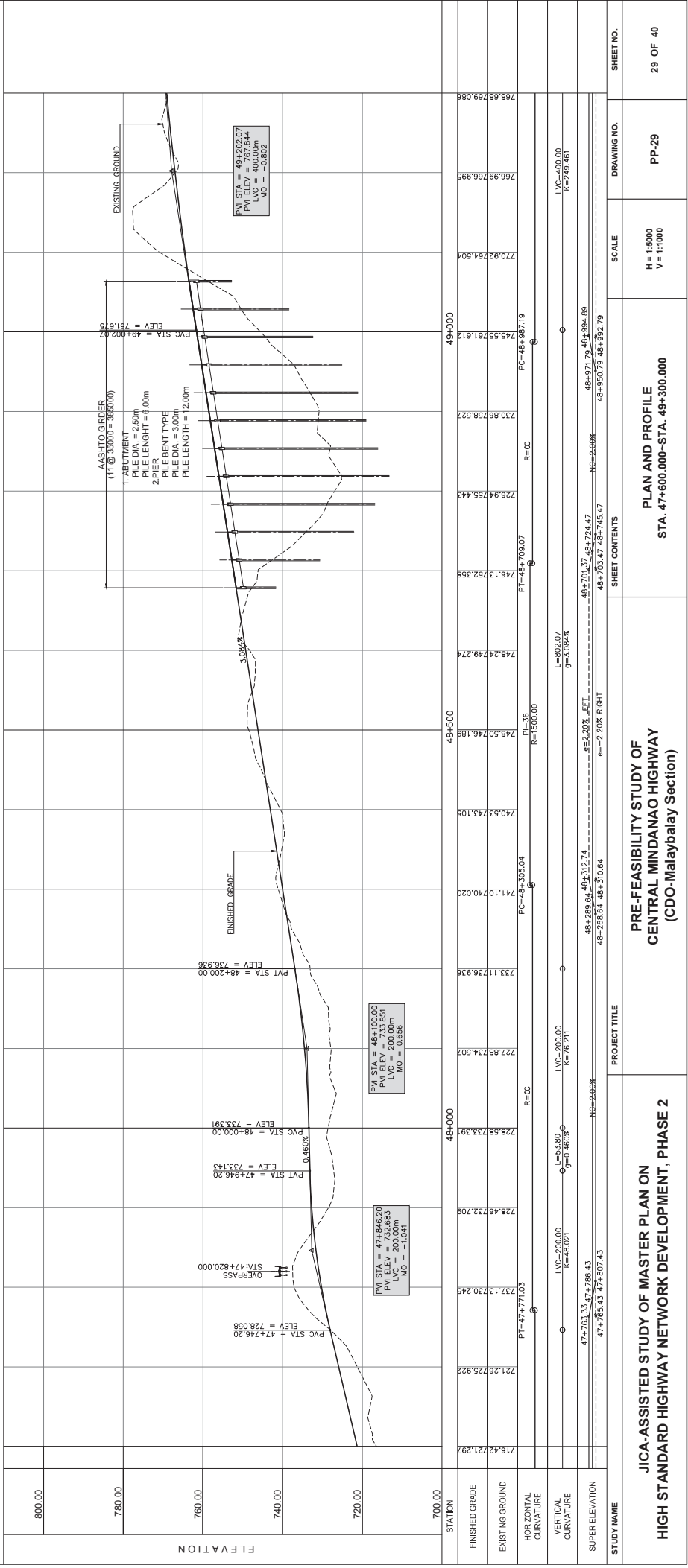
SCALE: H = 1:5000, V = 1:1000

DRAWING NO.: PP-28

SHEET NO.: 28 OF 40



ELEMENTS OF CURVE										
PI NO.	STATION	NORTHING	EASTING	ΔC	R	Lc	T	Ec	$e\%$	V(kph)
PI-36	48+508.29	915225.247	719240.454	15°25'58"	1500.00	404.032	203.246	13.707	-	-



**PRE-FEASIBILITY STUDY OF MASTER PLAN ON
HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2**

**PRE-FEASIBILITY STUDY OF
CENTRAL MINDANAO HIGHWAY
(CDO-Malaybalay Section)**

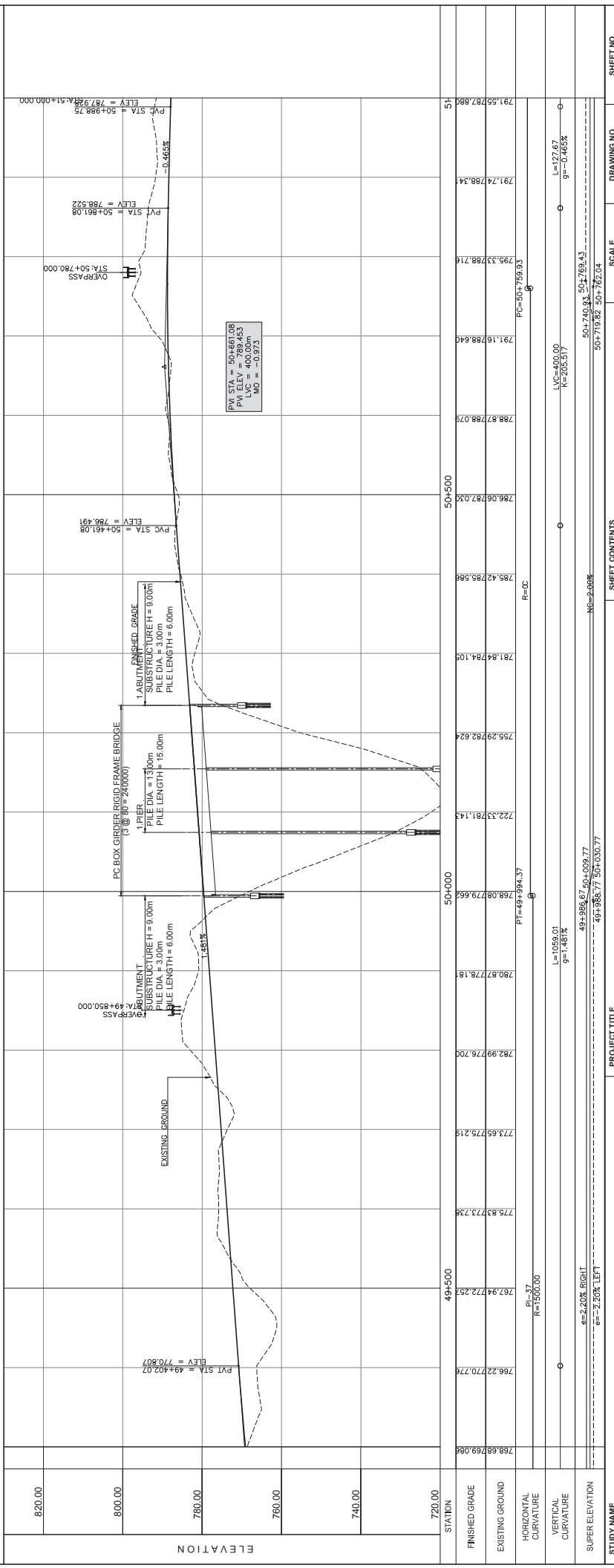
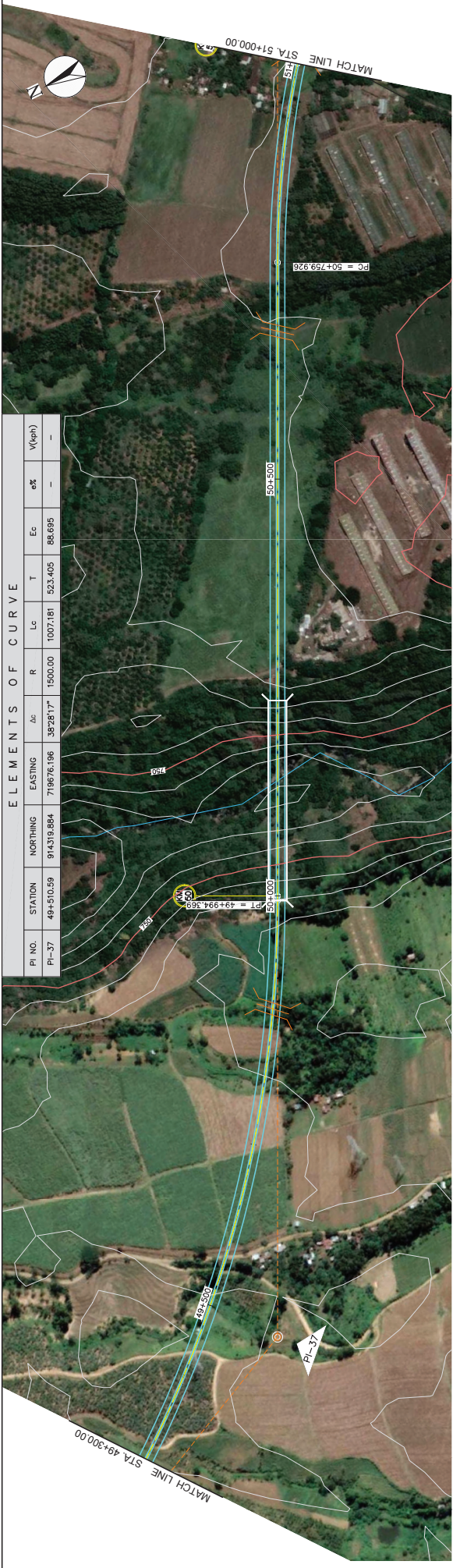
**PLAN AND PROFILE
STA. 47+600.000-STA. 49+300.000**

SCALE
H = 1:5000
V = 1:1000

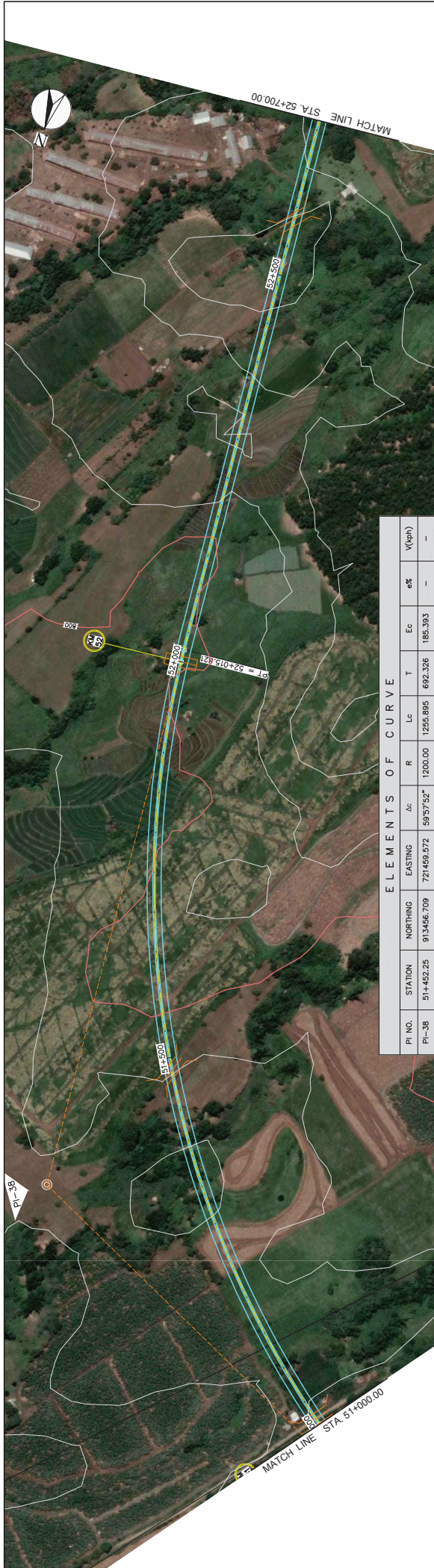
DRAWING NO.
PP-29

SHEET NO.
29 OF 40

ELEMENTS OF CURVE										
PI NO.	STATION	NORTHING	EASTING	Δc	R	Lc	T	Ec	α%	V(eph)
PI-37	49+510.59	914319.884	719676.196	382817'	1500.00	1007.181	523.405	88.695	-	-

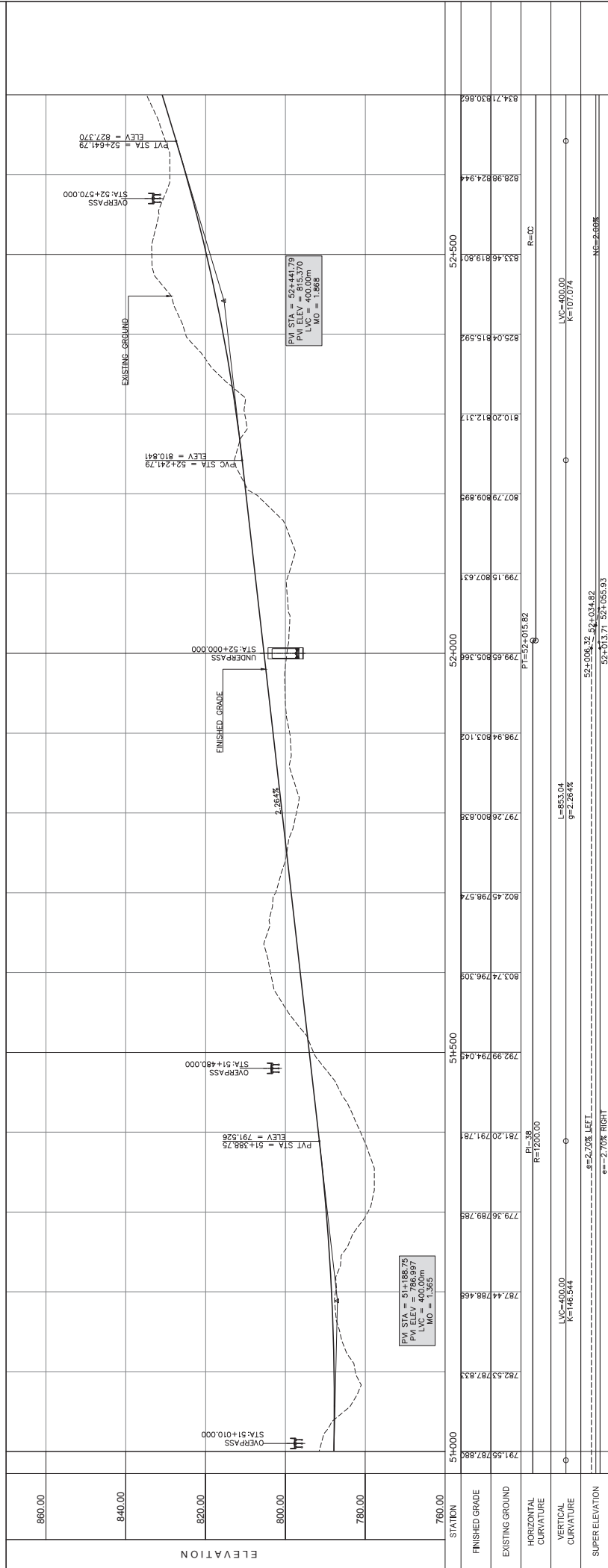


STUDY NAME		PROJECT TITLE		SHEET CONTENTS		SCALE		DRAWING NO.		SHEET NO.	
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2		PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)		PLAN AND PROFILE		STA. 49+300.00--STA. 51+000.00		PP-30		30 OF 40	
				H = 1:5000 V = 1:1000							



ELEMENTS OF CURVE

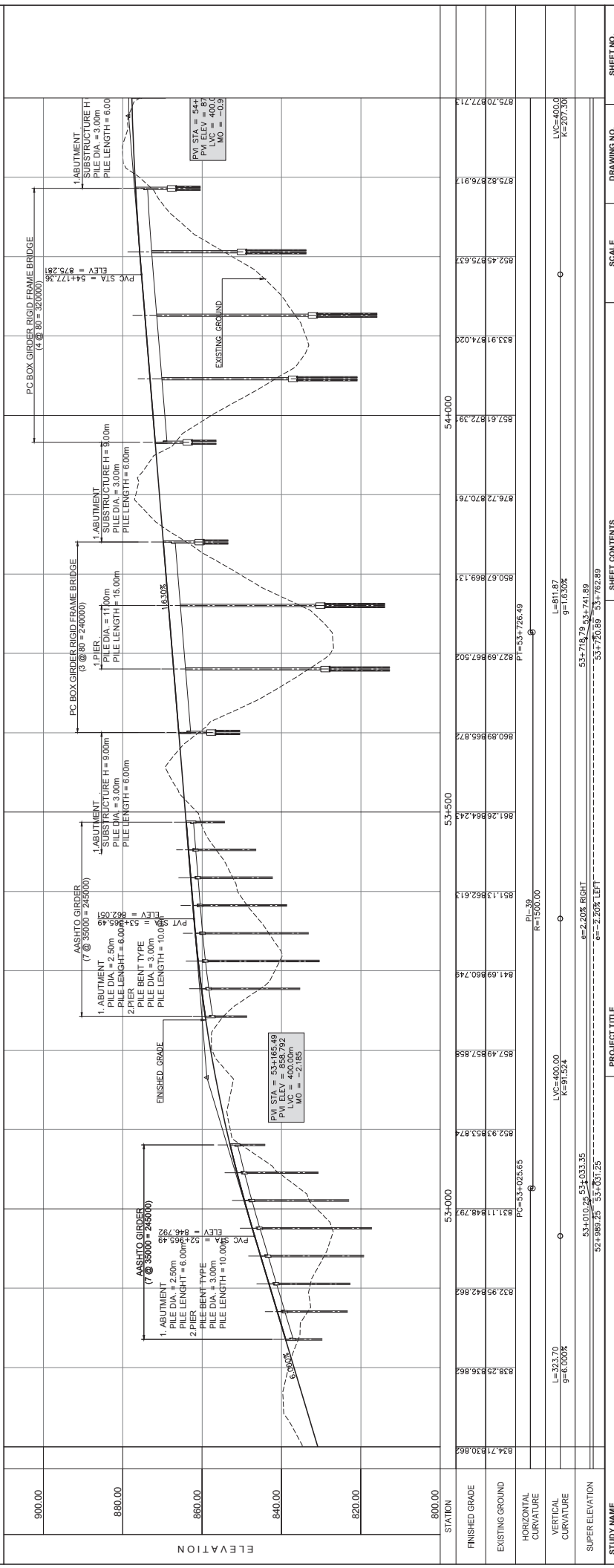
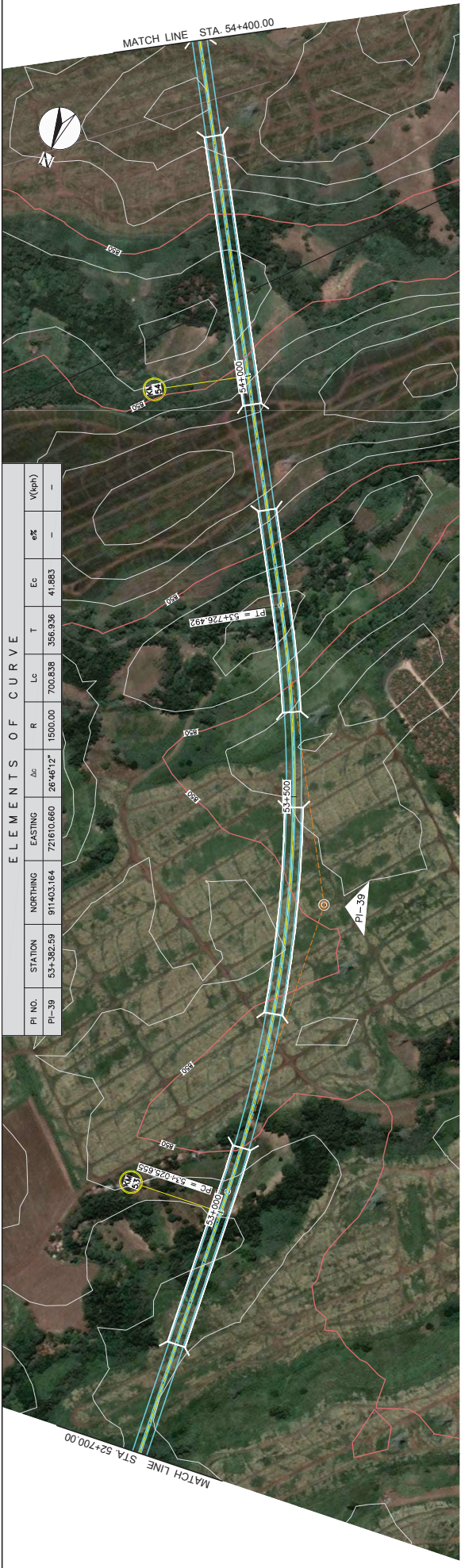
PI NO.	STATION	NORTHING	EASTING	ΔC	R	Lc	T	Ec	e%	V(ft)
PI-38	51+422.25	913456.709	721459.572	59°57'52"	1200.00	1255.895	692.326	185.393	—	—



STUDY NAME		PROJECT TITLE		SHEET CONTENTS		SCALE		DRAWING NO.		SHEET NO.	
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2		PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)		STA. 51+000.00-STA. 52+700.00		H = 1:5000 V = 1:1000		PP-31		31 OF 40	

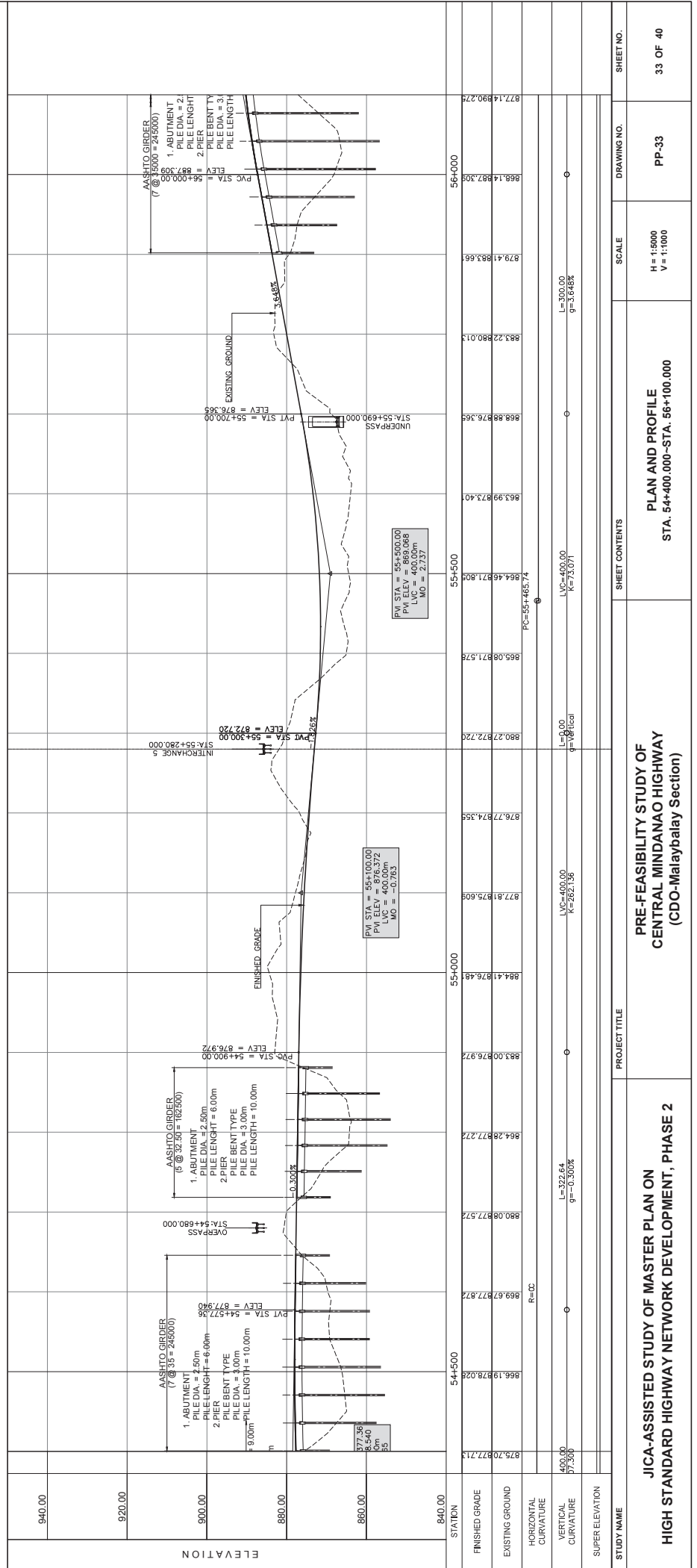
ELEMENTS OF CURVE

PI NO.	STATION	NORTHING	EASTING	$\Delta\alpha$	R	Lc	T	Ec	$e\%$	V(iph)
PI-39	53+362.59	911403.164	721610.660	26°46'12"	1900.00	700.538	356.936	41.883	-	-



STATION	53+000	53+500	54+000
FINISHED GRADE	834.71	842.86	872.39
EXISTING GROUND	838.25	836.86	824.02
HORIZONTAL CURVATURE	931.11	948.79	974.02
VERTICAL CURVATURE	832.92	842.86	852.63
SUPER ELEVATION	834.71	830.86	824.02

STUDY NAME	PROJECT TITLE	SHEET CONTENTS	SCALE	DRAWING NO.	SHEET NO.
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2	PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)	PLAN AND PROFILE STA. 52+700.00-STA. 54+400.000	H = 1:5000 V = 1:1000	PP-32	32 OF 40



A 15.1-36

JICA-ASSISTED STUDY OF MASTER PLAN ON
HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2

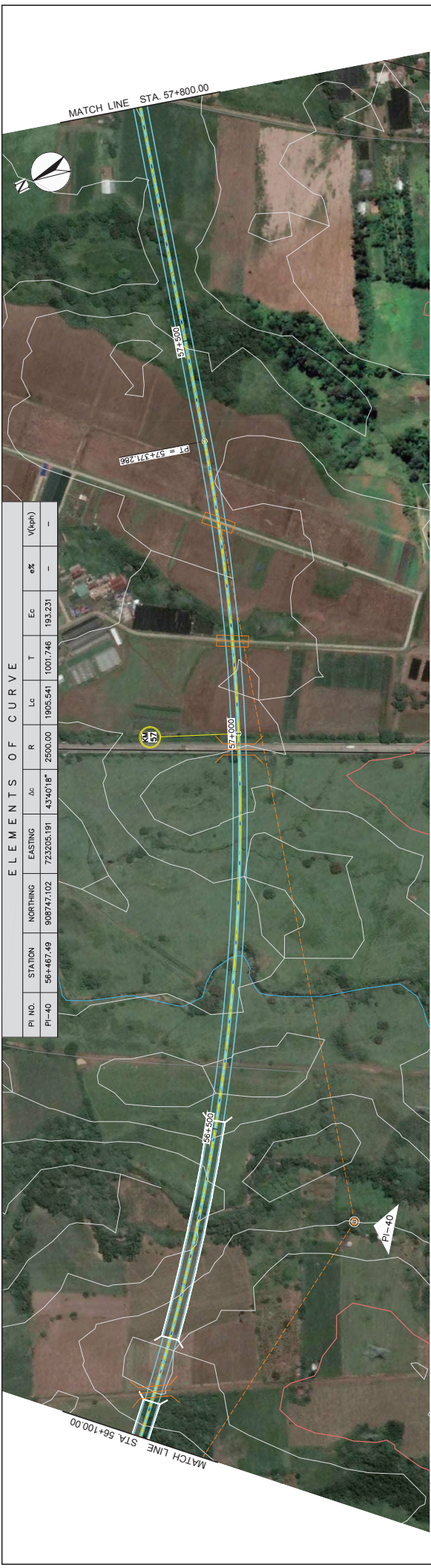
PRE-FEASIBILITY STUDY OF
CENTRAL MINDANAO HIGHWAY
(CDO-Malaybalay Section)

PLAN AND PROFILE
STA. 54+400.00-STA. 56+100.00

SCALE
H = 1:5000
V = 1:1000

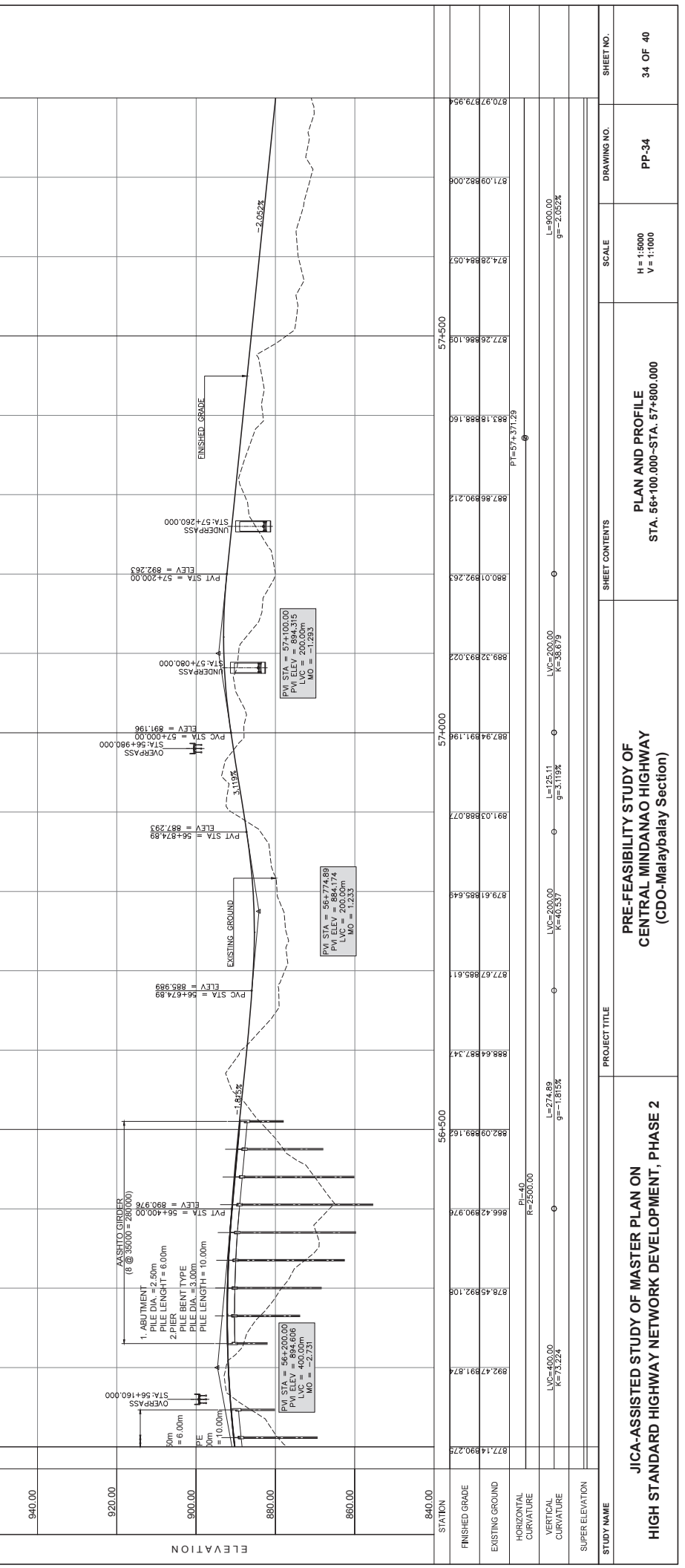
DRAWING NO.
PP-33

SHEET NO.
33 OF 40



E L E M E N T S O F C U R V E

PI NO.	STATION	NORTHING	EASTING	$\Delta\alpha$	R	Lc	T	Ec	$e\%$	V(gh)
PI-40	56+467.49	908747.02	723205.91	43°40'18"	2500.00	1905.541	1001.746	193.231	-	-



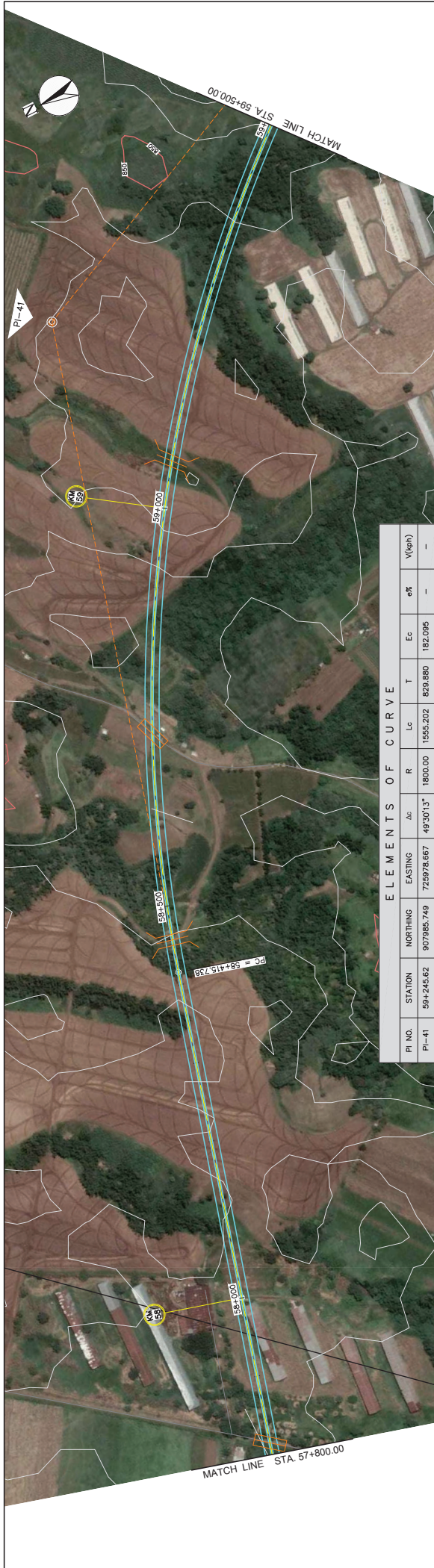
STATION	574000	574500	575000	575500	576000	576500	577000	577500	578000
FINISHED GRADE	882.94	882.94	882.94	882.94	882.94	882.94	882.94	882.94	882.94
EXISTING GROUND	882.94	882.94	882.94	882.94	882.94	882.94	882.94	882.94	882.94
HORIZONTAL CURVATURE									
VERTICAL CURVATURE									
SUPER ELEVATION									

**PRE-FEASIBILITY STUDY OF MASTER PLAN ON
HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2**

**PRE-FEASIBILITY STUDY OF
CENTRAL MINDANAO HIGHWAY
(CDO-Malaybalay Section)**

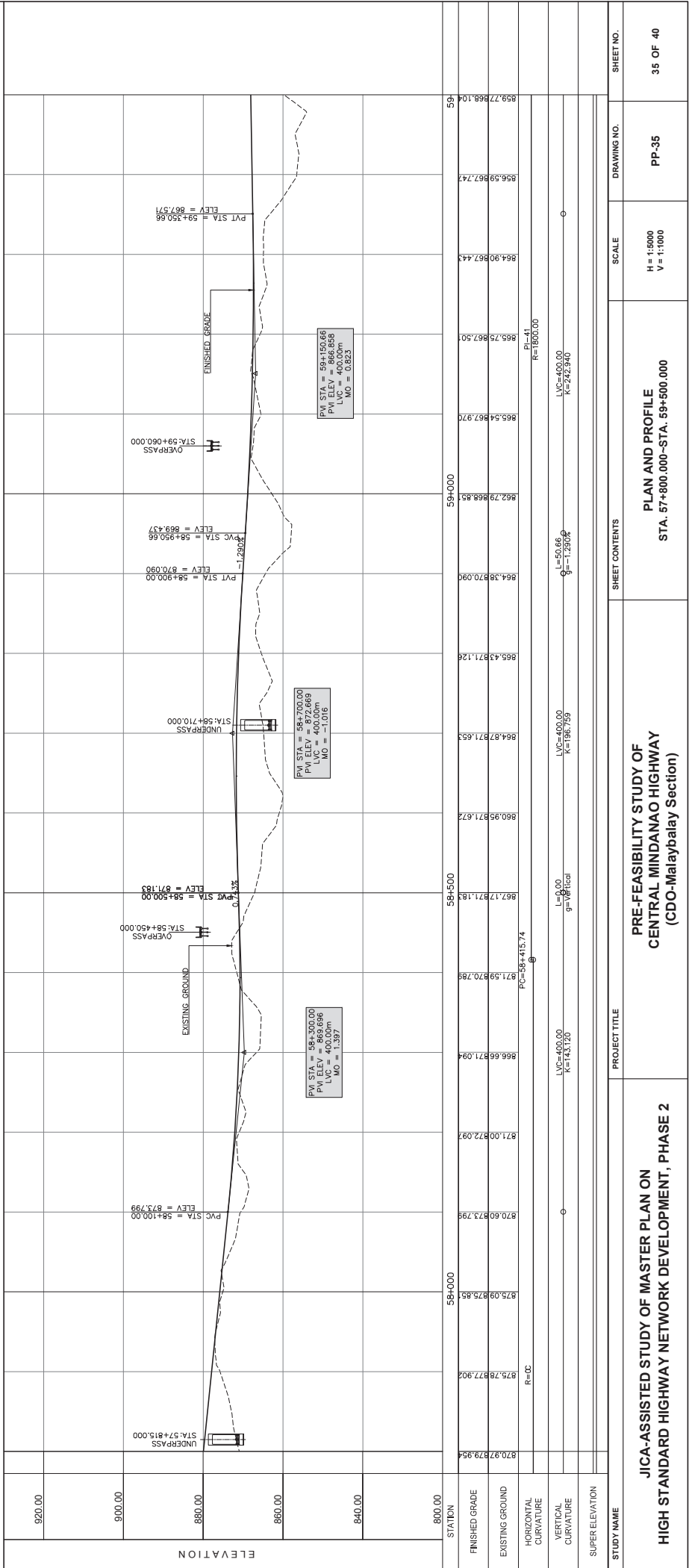
**PLAN AND PROFILE
STA. 56+100.00-STA. 57+800.00**

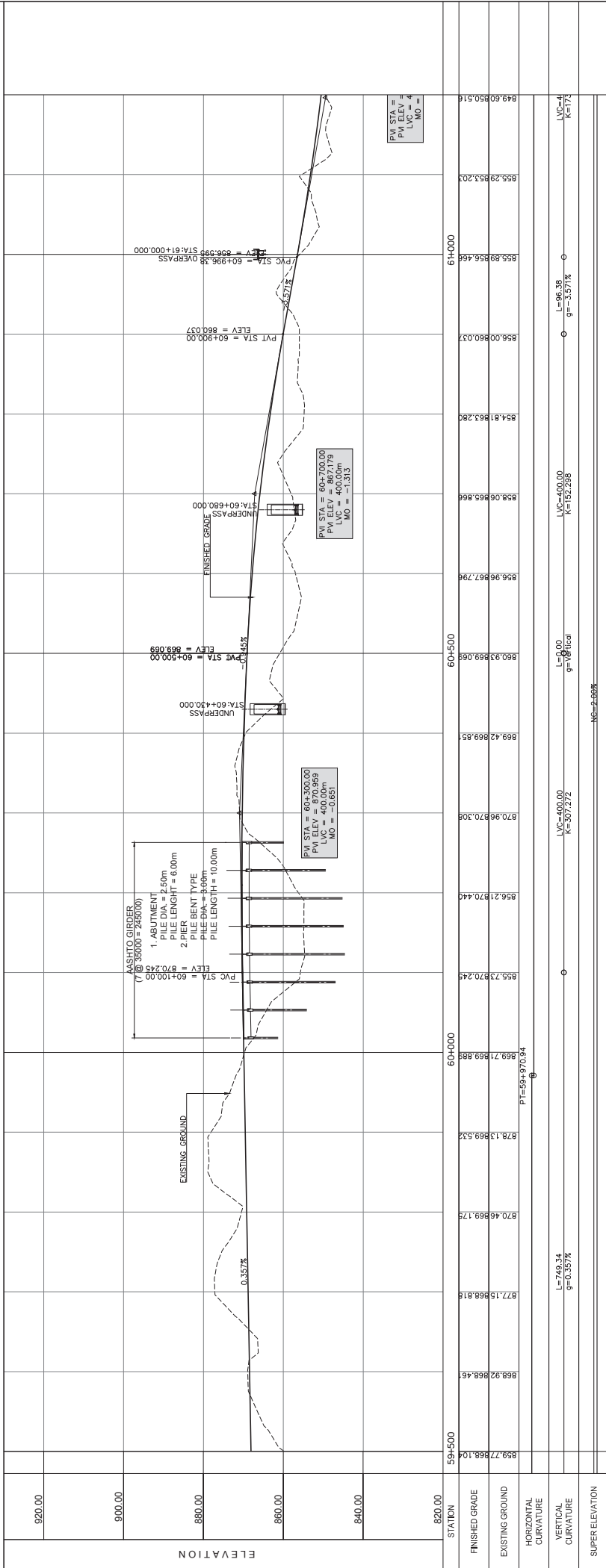
DRAWING NO. PP-34
SCALE H = 1:5000
V = 1:1000
SHEET NO. 34 OF 40



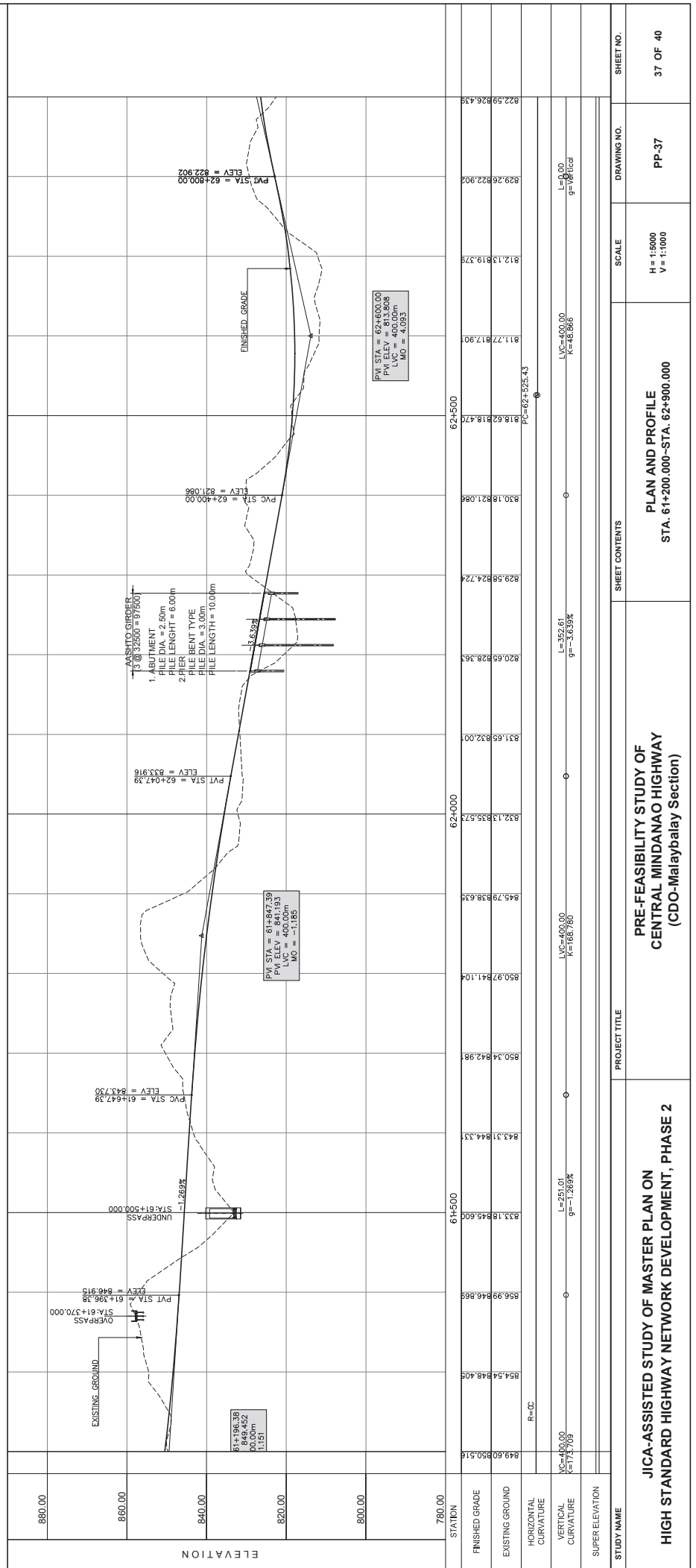
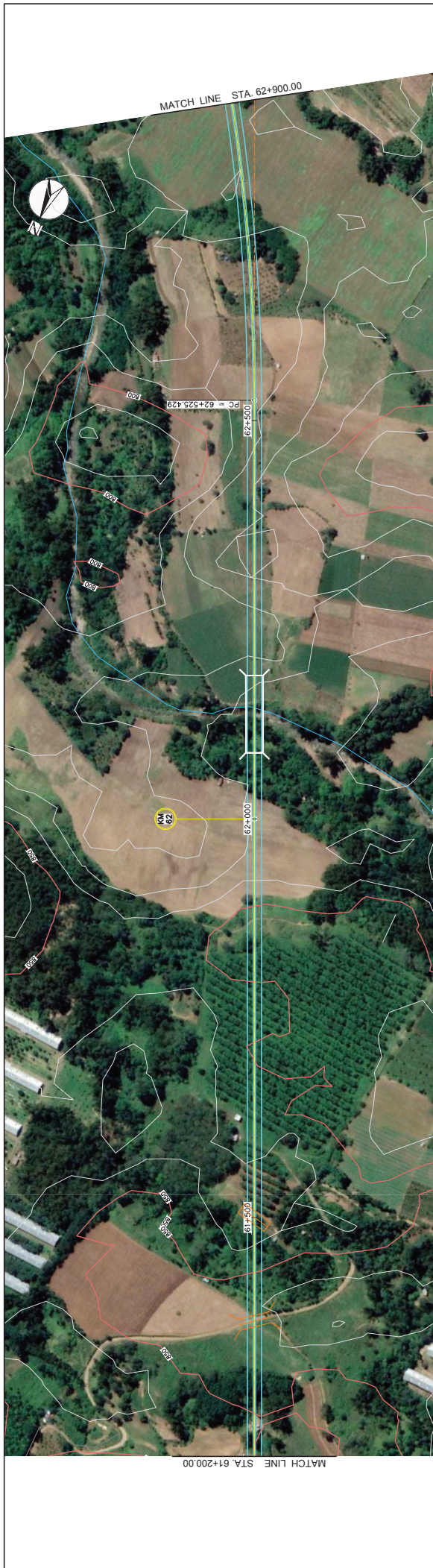
ELEMENTS OF CURVE

PI NO.	STATION	NORTHING	EASTING	Δc	R	Lc	T	Ec	e%	V(veh)
PI-41	58+245.62	907985.749	725978.667	49°30'13"	1800.00	1555.202	829.880	182.095	-	-



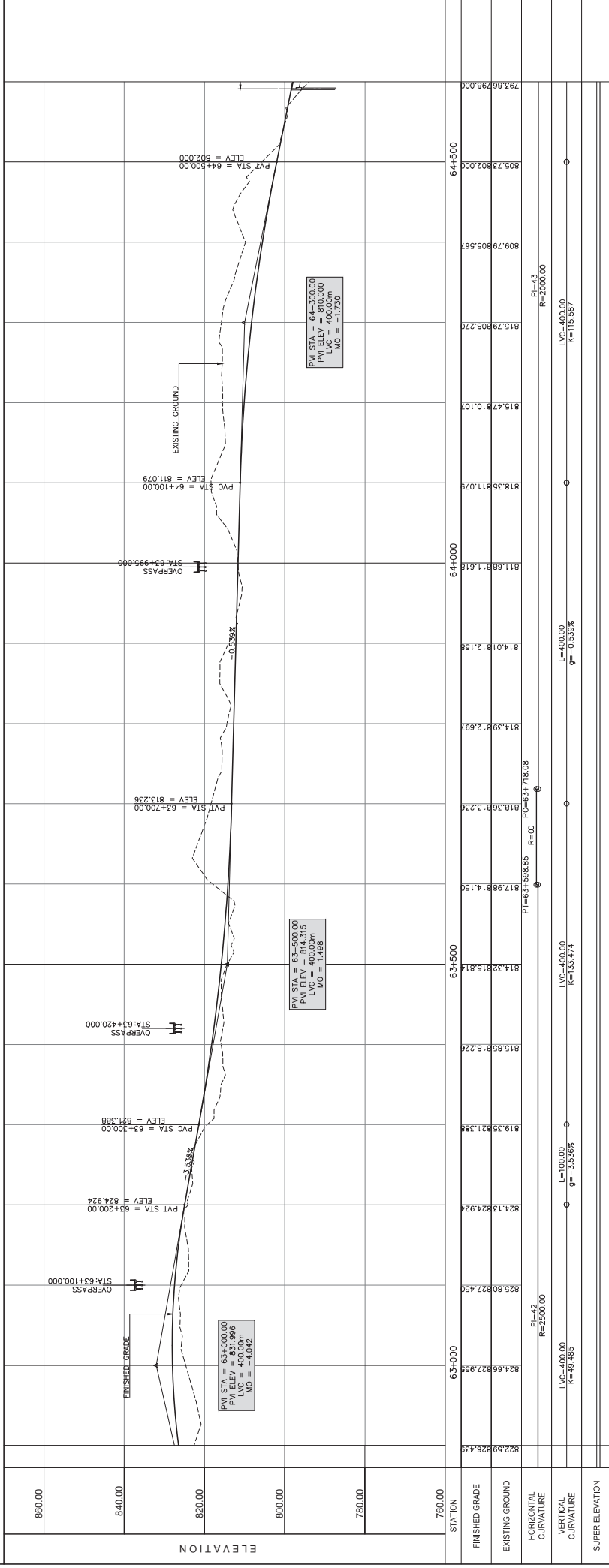
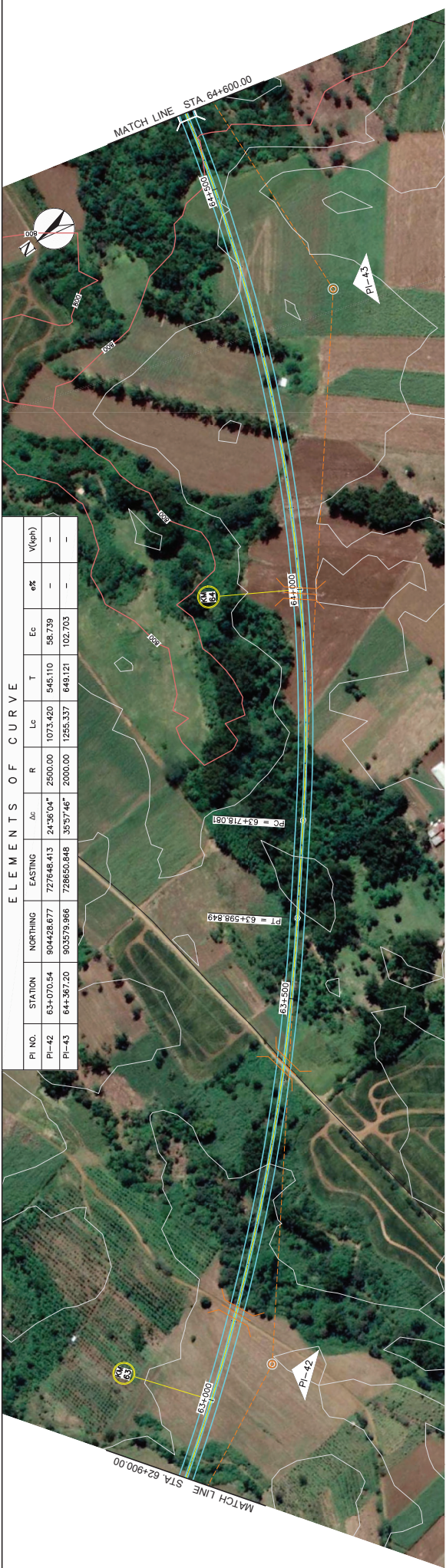


STUDY NAME	PROJECT TITLE	SHEET CONTENTS	SCALE	DRAWING NO.	SHEET NO.
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2	PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)	PLAN AND PROFILE STA. 59+500.000-STA. 61+200.000	H = 1:5000 V = 1:1000	PP-36	36 OF 40



E L E M E N T S O F C U R V E

PI NO.	STATION	NORTHING	EASTING	$\Delta\alpha$	R	Lc	T	Ec	e%	V(gh)
PI-42	63+070.54	904428.677	727648.413	24°36'04"	2500.00	1073.420	545.110	587.739	-	-
PI-43	64+367.20	903579.966	728650.848	35°57'46"	2000.00	1255.337	648.121	1027.703	-	-



STATION	63+000	63+500	64+000	64+500
FINISHED GRADE	824.66827.956	819.35821.388	814.01812.156	809.79205.567
EXISTING GROUND	824.66827.956	819.35821.388	814.01812.156	809.79205.567
HORIZONTAL CURVATURE	R=2500.00	R=2500.00	R=2500.00	R=2500.00
VERTICAL CURVATURE	L=49.485	L=100.00	L=400.00	L=400.00
SUPER ELEVATION	K=49.485	g=-3.556%	g=-0.538%	g=-0.538%

STUDY NAME JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2

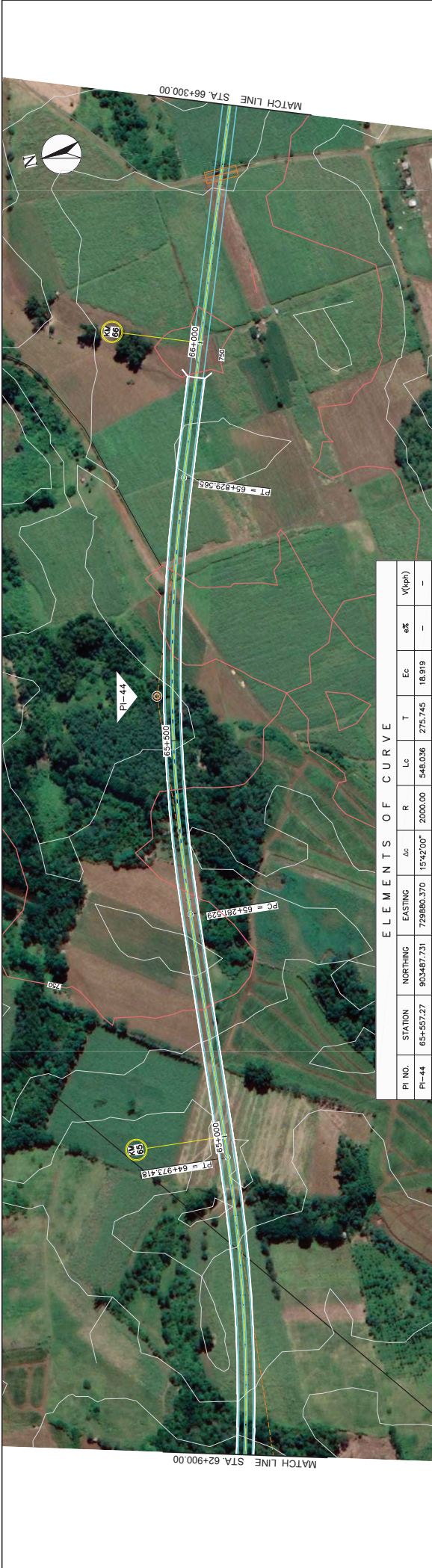
PROJECT TITLE PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)

SHEET CONTENTS PLAN AND PROFILE STA. 62+900.00-STA. 64+600.00

SCALE H = 1:5000
V = 1:1000

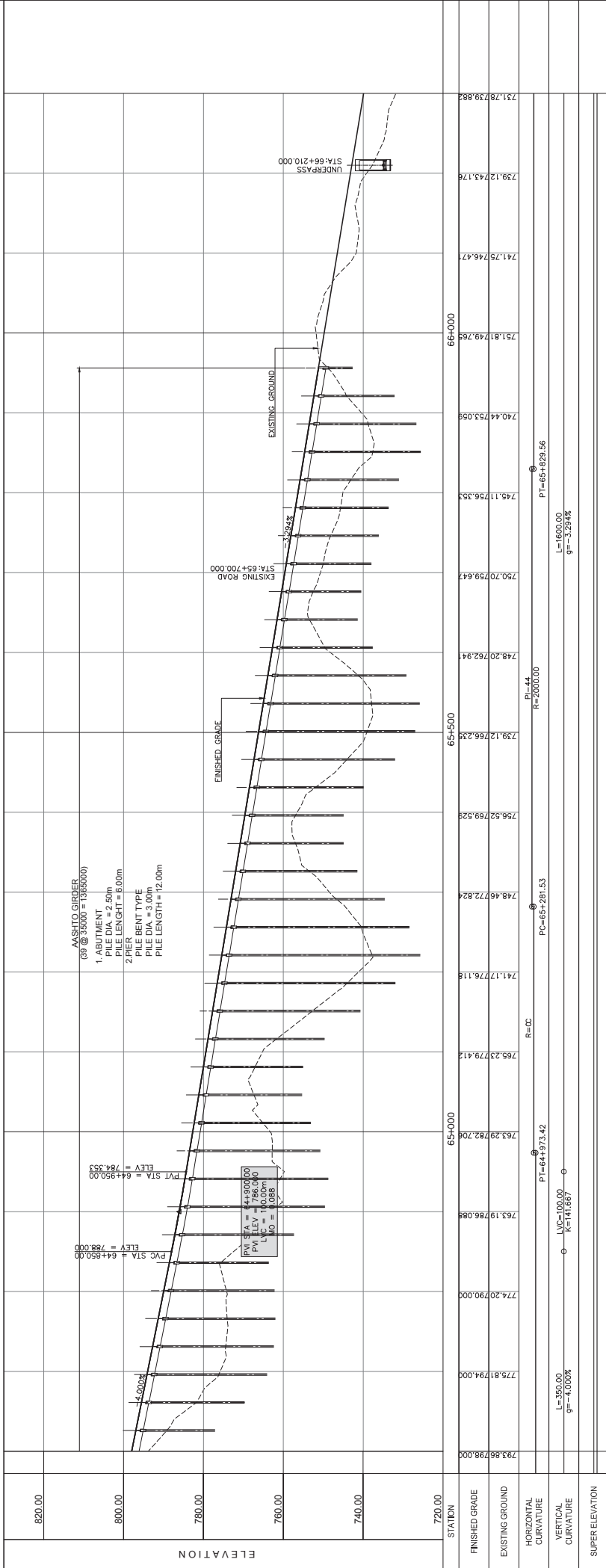
DRAWING NO. PP-38

SHEET NO. 38 OF 40



ELEMENTS OF CURVE

PI NO.	STATION	NORTHING	EASTING	Δc	$15'2''200''$	R	Lc	T	Ec	e%	V(veh)
PI-44	65+557.27	903487.731	729860.370	15'2''200''	2000.00	2000.00	548.036	275.745	18.919	-	-



STATION	720.00	740.00	760.00	780.00	800.00	820.00
FINISHED GRADE	793.88798.000	774.20790.000	763.23779.412	763.29782.706	765.52769.926	750.70759.647
EXISTING GROUND	793.88798.000	774.20790.000	763.23779.412	763.29782.706	750.70759.647	743.12743.176
HORIZONTAL CURVATURE						
VERTICAL CURVATURE						
SUPER ELEVATION						

STUDY NAME
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2

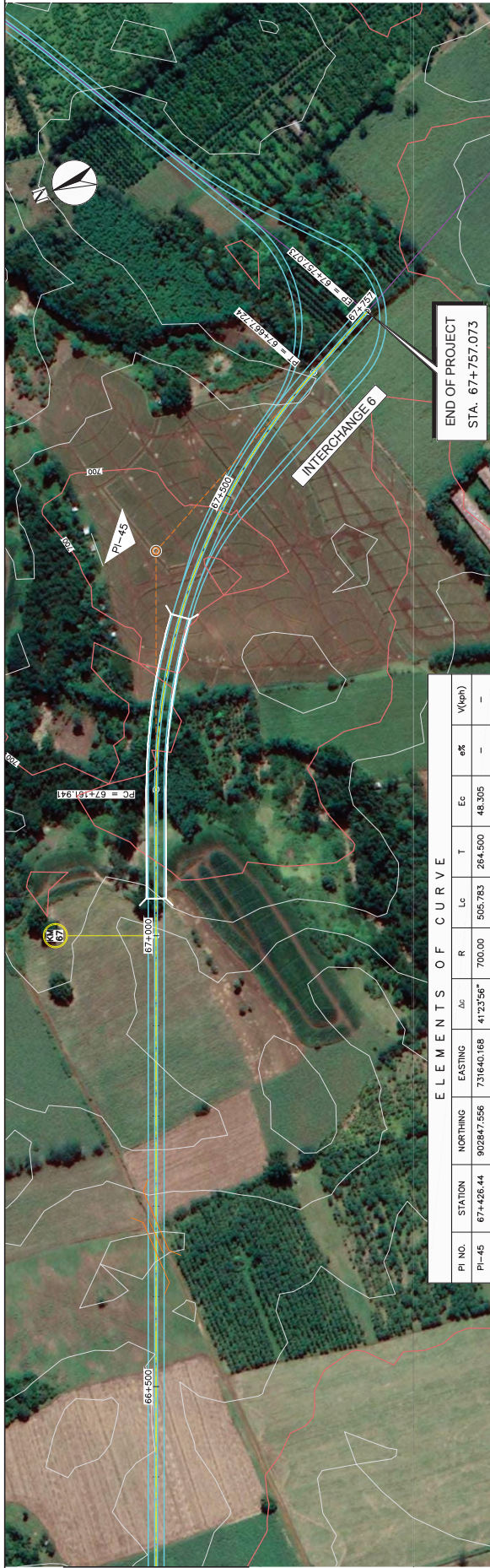
PROJECT TITLE
PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)

SHEET CONTENTS
PLAN AND PROFILE
STA. 64+600.000-STA. 66+300.000

DRAWING NO.
PP-39

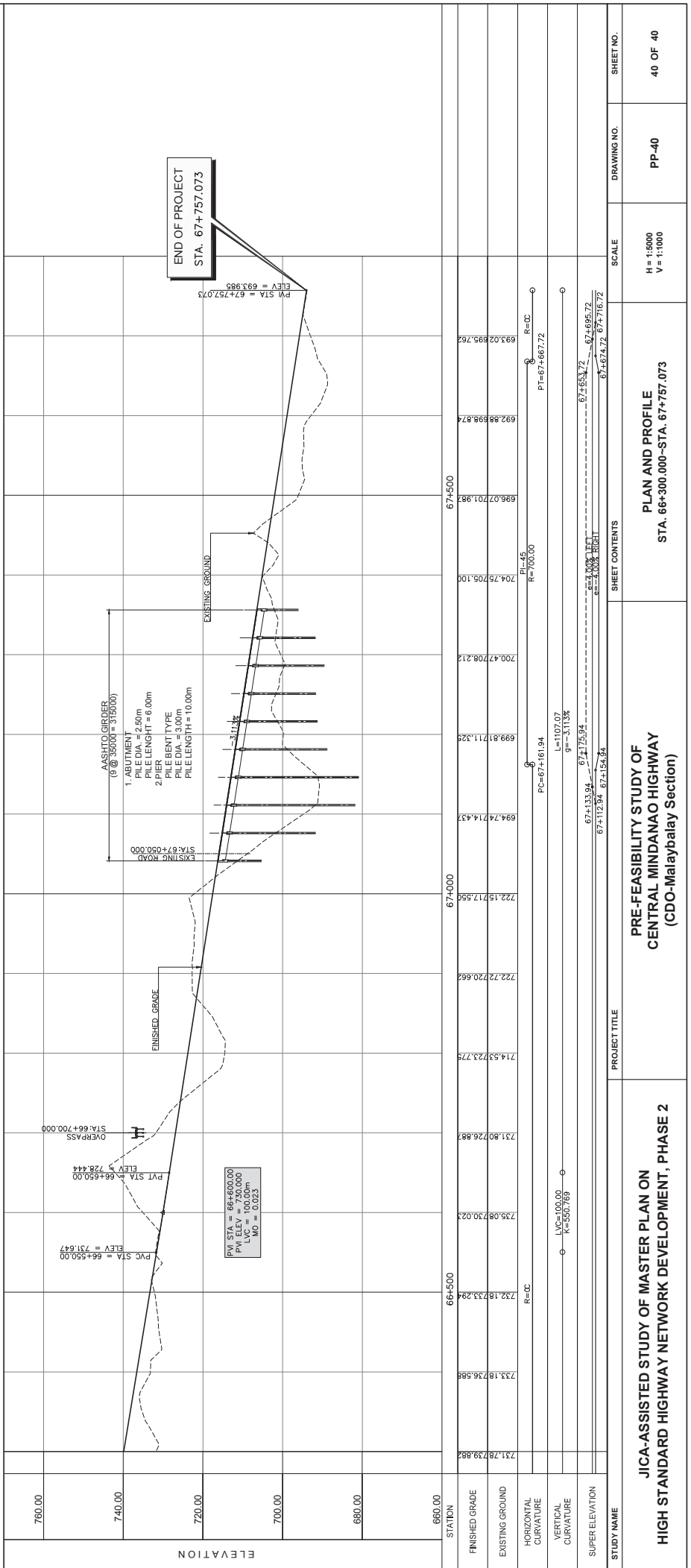
SCALE
H = 1:5000
V = 1:1000

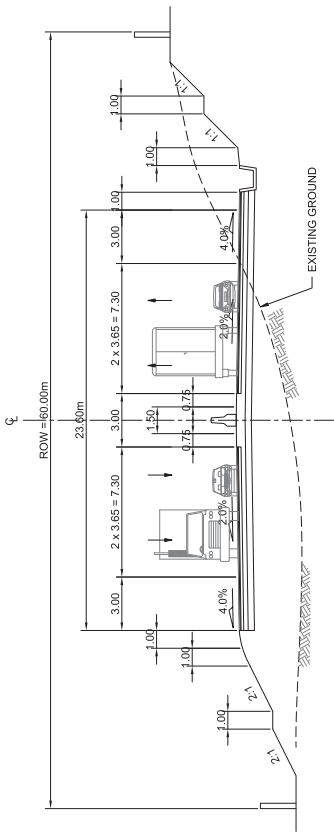
SHEET NO.
39 OF 40



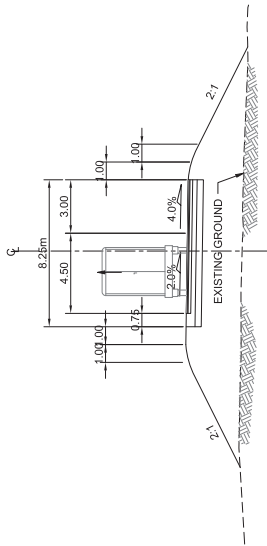
ELEMENTS OF CURVE

PI NO.	STATION	NORTHING	EASTING	ΔC	R	Lc	T	Ec	e%	V(pn)
PI-45	67+426.44	902847.556	731640.168	41°23'56"	700.00	505.783	284.500	48.305	—	—

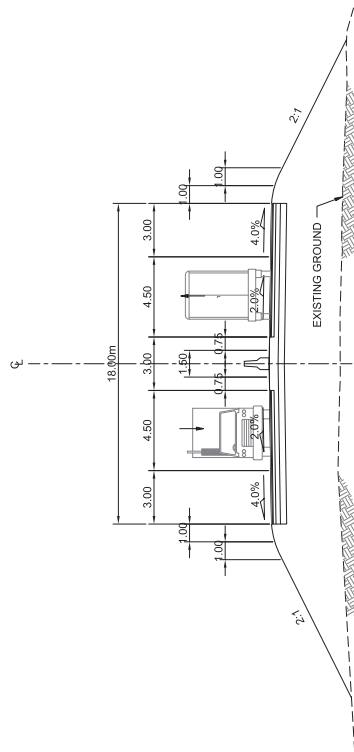




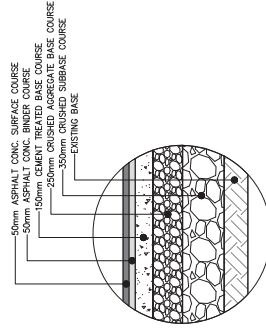
1 - TYPICAL ROAD CROSS SECTION (4-LANE)
SCALE 1:300



3 - TYPICAL SECTION (1 - WAY RAMP)
SCALE 1:300

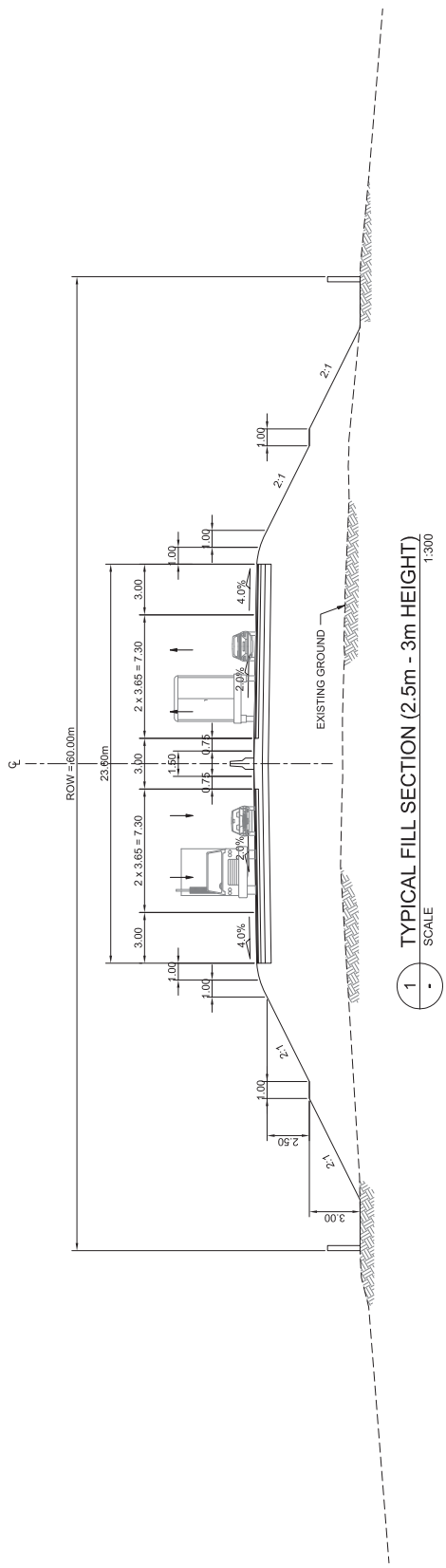


2 - TYPICAL SECTION (2 - WAY RAMP)
SCALE 1:300

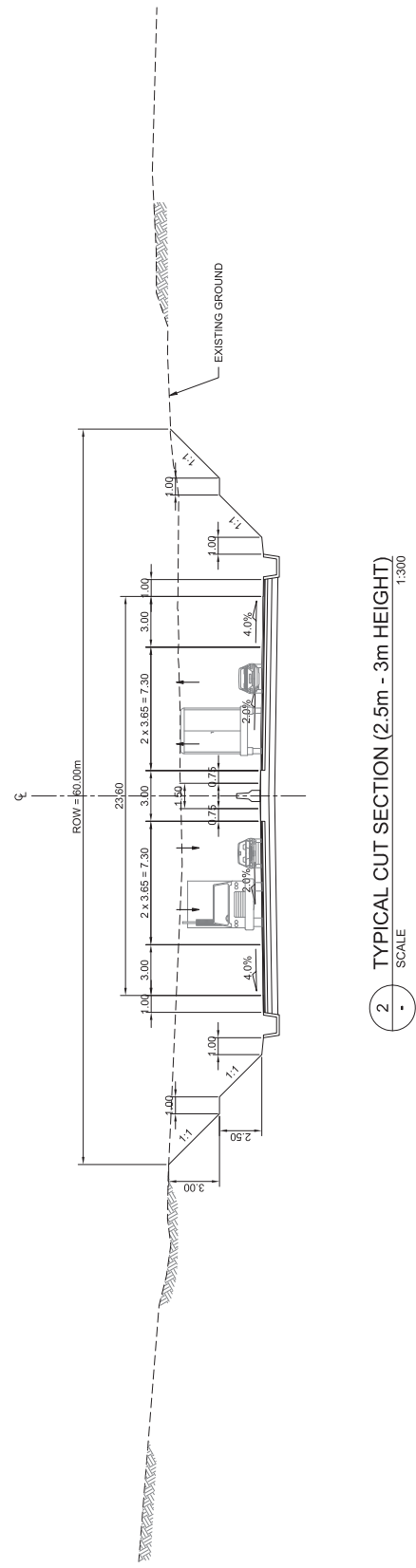


PAVEMENT DETAIL

STUDY NAME	PROJECT TITLE	SHEET CONTENTS	SCALE	DRAWING NO.	SHEET NO.
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2	PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)	TYPICAL ROADWAY SECTIONS AND PAVEMENT DETAILS	1:300	TS-01	1 OF 4

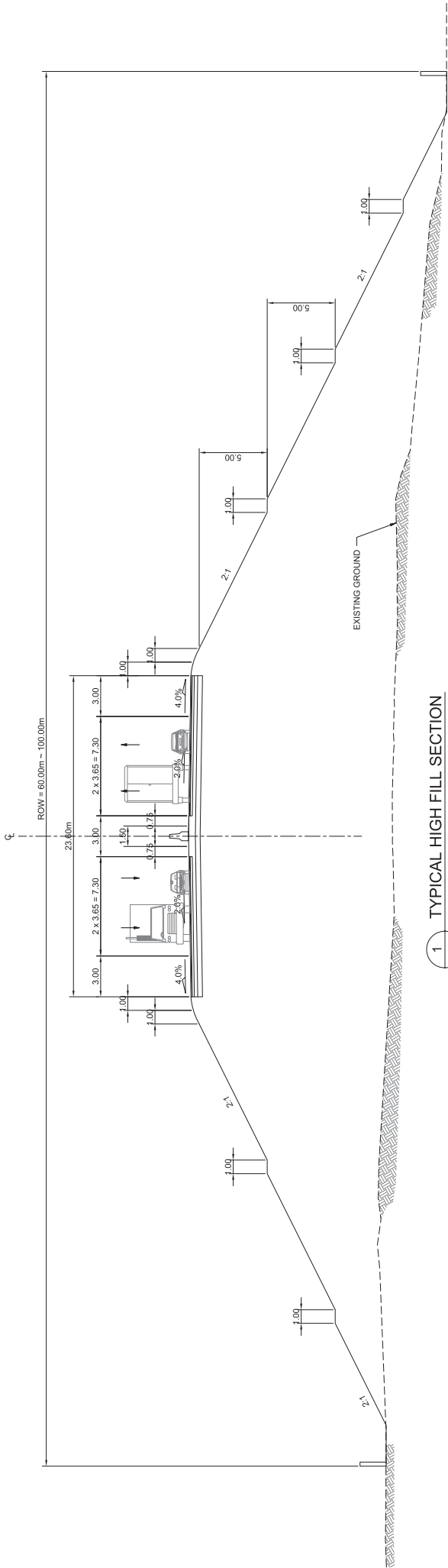


1 TYPICAL FILL SECTION (2.5m - 3m HEIGHT)
SCALE 1:300

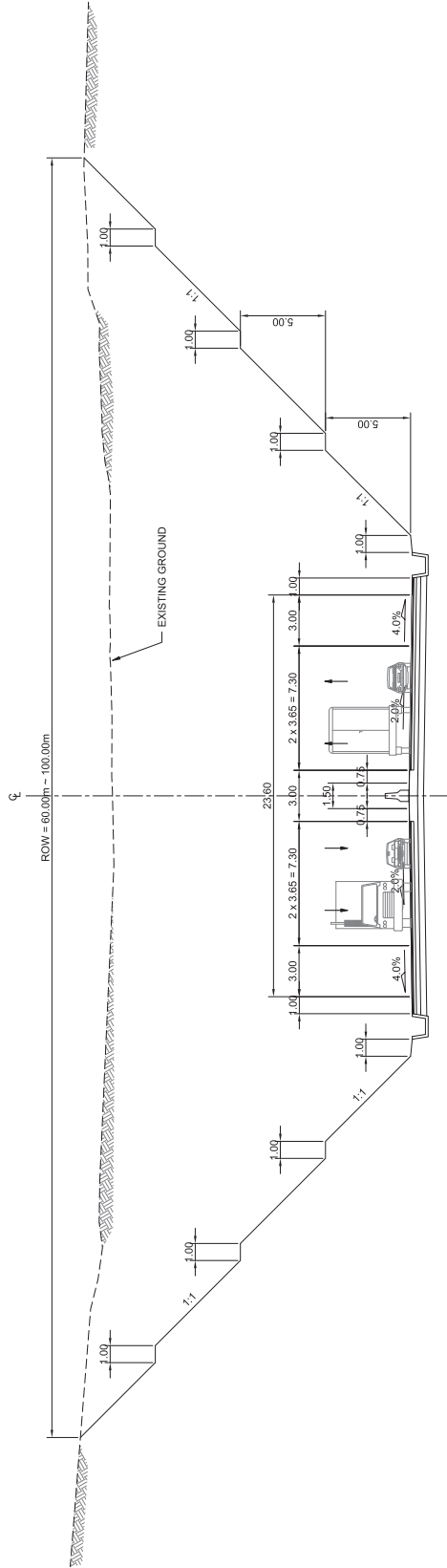


2 TYPICAL CUT SECTION (2.5m - 3m HEIGHT)
SCALE 1:300

STUDY NAME	PROJECT TITLE	SHEET CONTENTS	SCALE	DRAWING NO.	SHEET NO.
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2	PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)	TYPICAL ROADWAY SECTIONS TYPICAL CUT AND FILL SECTION	1:300	TS-02	2 OF 4

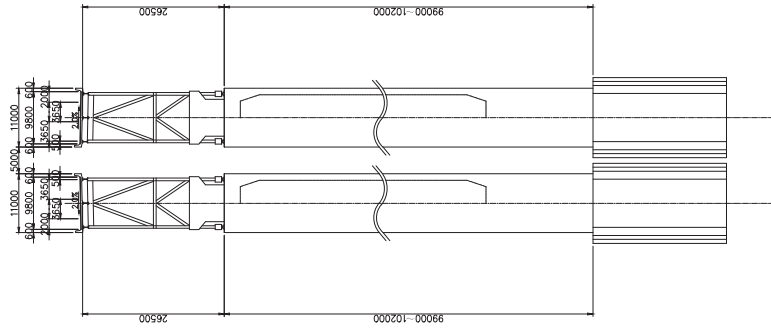


1 TYPICAL HIGH FILL SECTION
SCALE 1:300

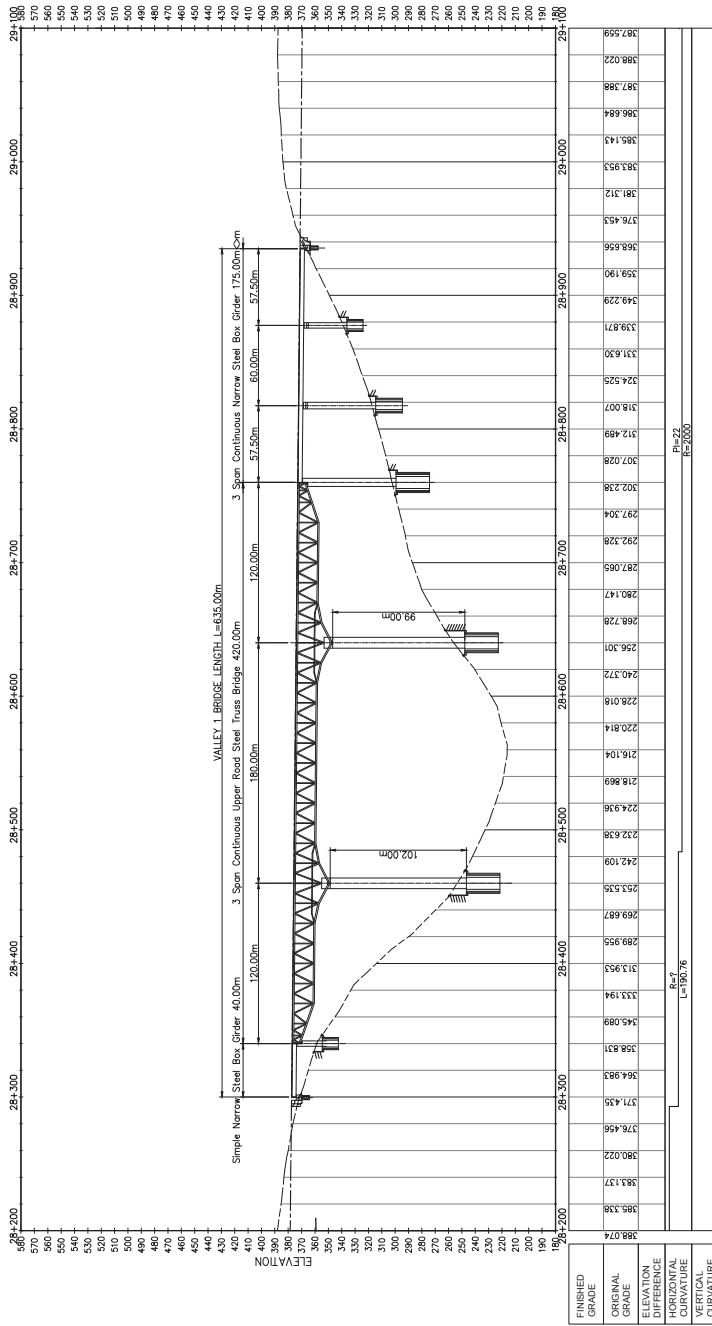


2 TYPICAL HIGH CUT SECTION
SCALE 1:300

STUDY NAME	PROJECT TITLE	SHEET CONTENTS	SCALE	DRAWING NO.	SHEET NO.
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2	PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)	TYPICAL ROADWAY SECTIONS TYPICAL HIGH FILL AND HIGH CUT SECTION	1:300	TS-03	3 OF 4

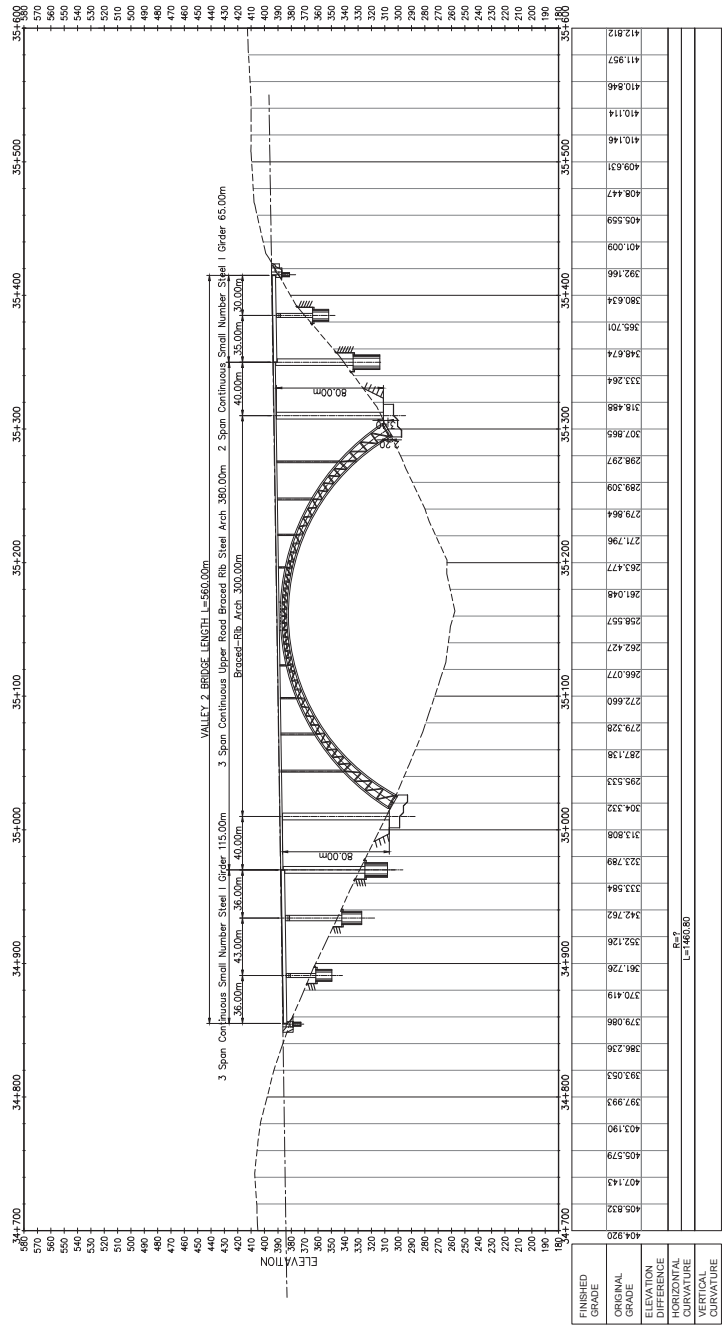


2 SECTION
SCALE 1:1000

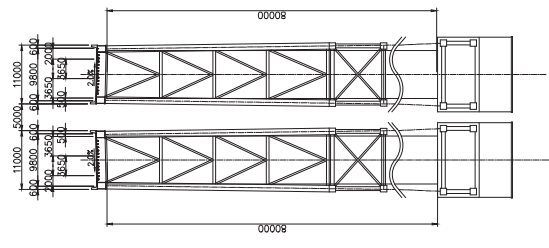


1 VALLEY 1 BRIDGE ELEVATION
SCALE 1:4000

STUDY NAME	JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2
PROJECT TITLE	PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)
SHEET CONTENTS	VALLEY 1 BRIDGE ELEVATION AND SECTION
SCALE	AS SHOWN
DRAWING NO.	BR-01
SHEET NO.	1 OF 2



1 VALLEY 2 BRIDGE ELEVATION SCALE 1:4000



STUDY NAME	PROJECT TITLE	SHEET CONTENTS	SCALE	DRAWING NO.	SHEET NO.
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2	PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)	VALLEY 2 BRIDGE ELEVATION AND SECTION	AS SHOWN	BR-02	2 OF 2



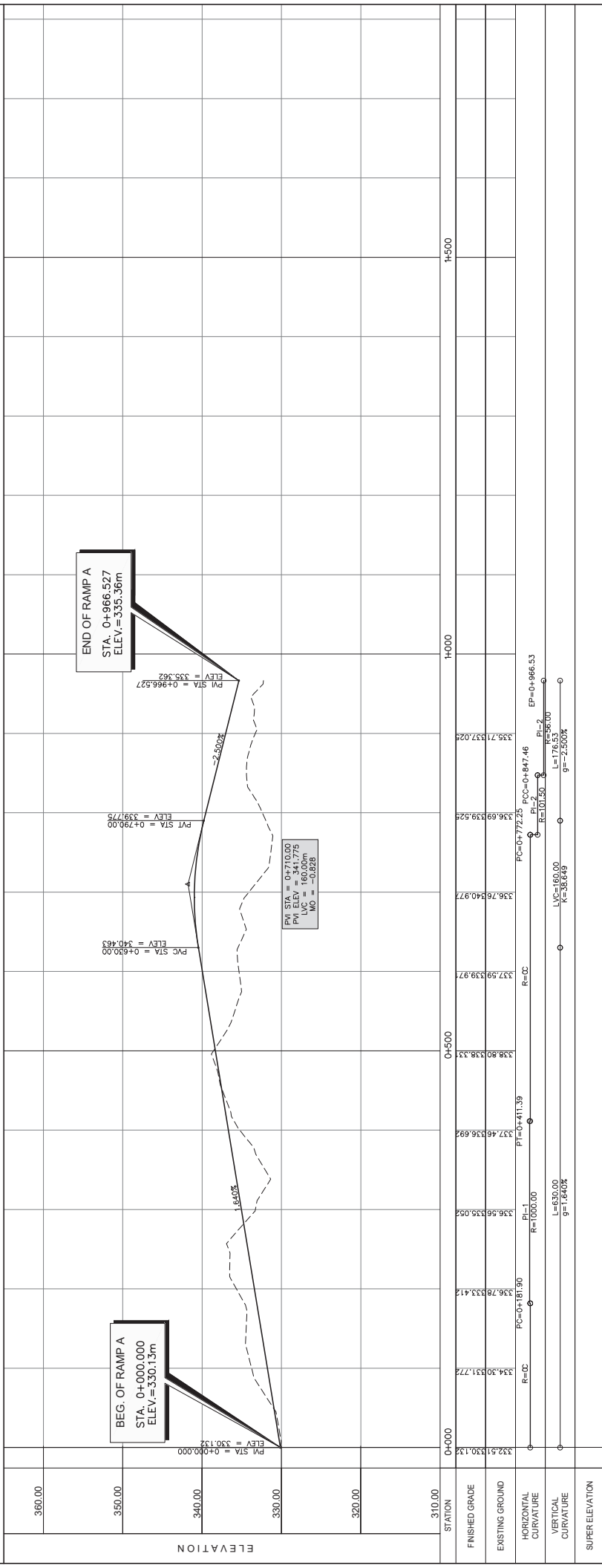
1
SCALE
1:2500

STUDY NAME	PROJECT TITLE	SHEET CONTENTS	SCALE	DRAWING NO.	SHEET NO.
<p>JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2</p>	<p>PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)</p>	<p>INTERCHANGE 1 LAYOUT PLAN (OVERPASS) STA. 12+160.000</p>	<p>1 : 2500</p>	<p>PP-01</p>	<p>1 OF 27</p>



E L E M E N T S O F C U R V E

PI NO.	STATION	NORTHING	EASTING	$\Delta\alpha$	R	Lc	T	$e\%$	V(veh)
PI-1	0+297.15	935084.237	697665.026	13°08'56"	1000.00	229.494	115.253	6.620	-
PI-2	0+811.68	935182.335	698166.855	42°27'14"	101.50	75.207	39.424	7.386	-
PI-3	0+948.12	935296.050	698245.800	121°49'14"	95.00	119.066	100.655	59.184	-



STATION	360.00	350.00	340.00	330.00	320.00	310.00
FINISHED GRADE	332.61	330.13	334.58	333.41	337.46	338.80
EXISTING GROUND	332.61	330.13	335.05	333.41	339.97	340.97
HORIZONTAL CURVATURE	R=CC	R=CC	R=1000.00	PI=0+411.39	R=CC	R=CC
VERTICAL CURVATURE	L=630.00	g=-1.640%	L=1000.00	L=176.53	g=-2.500%	L=101.50
SUPER ELEVATION						

STUDY NAME
JICA-ASSISTED STUDY OF MASTER PLAN ON HIGH STANDARD HIGHWAY NETWORK DEVELOPMENT, PHASE 2

PROJECT TITLE
PRE-FEASIBILITY STUDY OF CENTRAL MINDANAO HIGHWAY (CDO-Malaybalay Section)

SHEET CONTENTS
INTERCHANGE 1 PLAN AND PROFILE RAMP A

SCALE
 H = 1:5000
 V = 1:500

DRAWING NO.
 PP-02

SHEET NO.
 2 OF 27