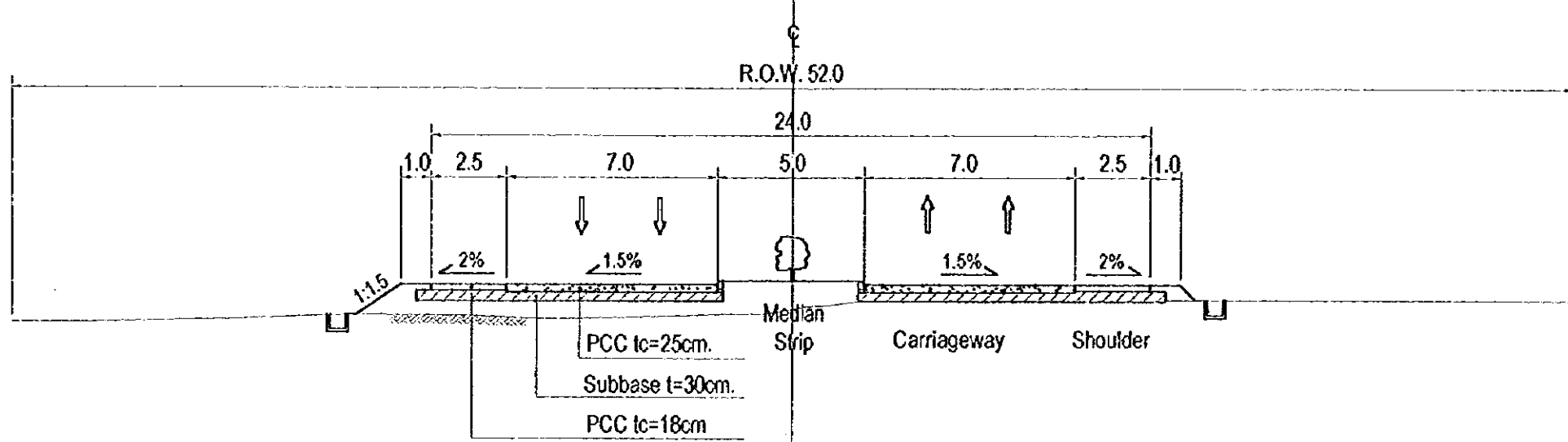
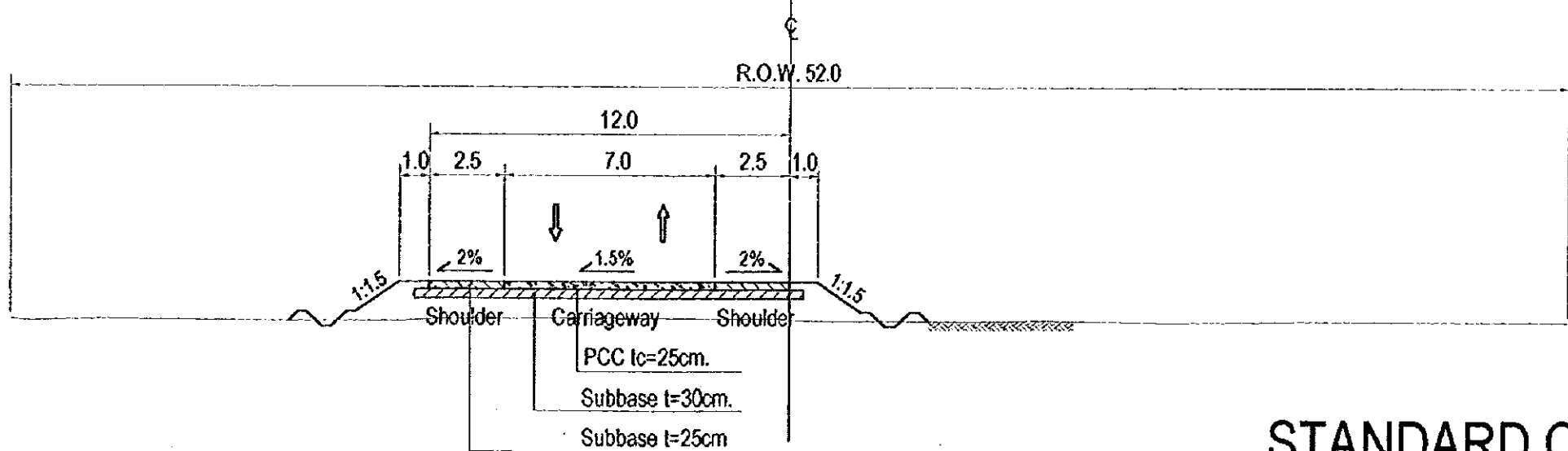


Planned Urban Area (with Frontage Road)



Outskirts of Planned Urban Area (without Frontage Road)



Stage Construction (Two-Lane Road)

**STANDARD CROSS SECTION
CABANATUAN BYPASS**

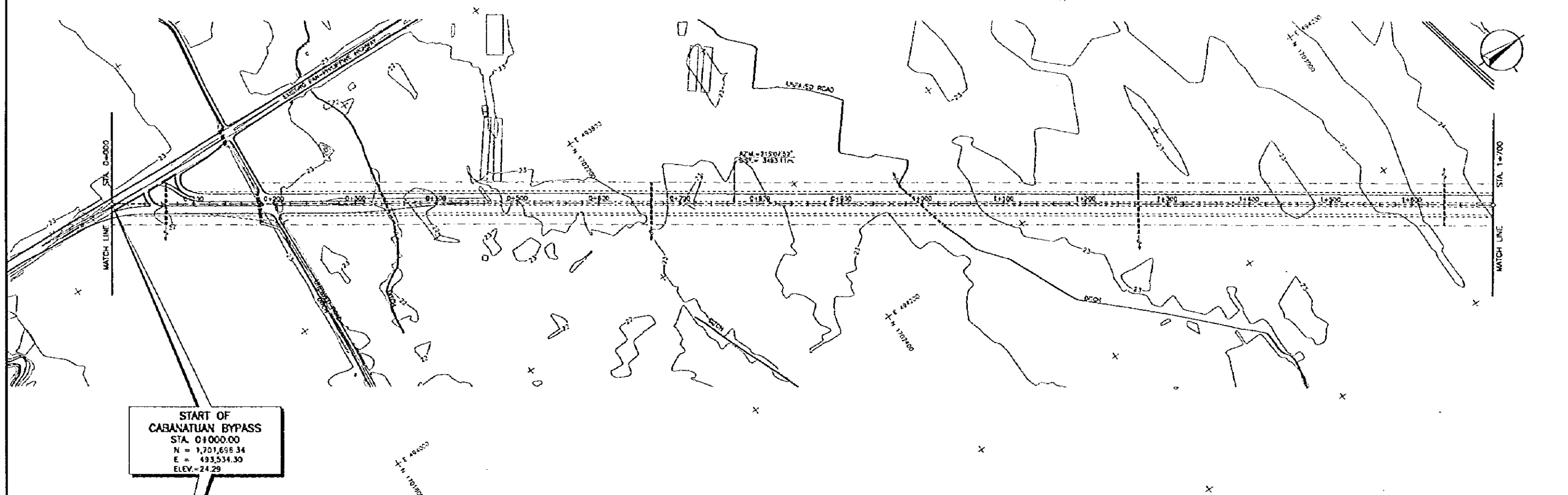
THE FEASIBILITY STUDY ON INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (STA. RITA, PLARIDEL-SAN JOSE SECTION)

SCALE :
HOR. 1:2500
VER. 1:250

CABANATUAN BYPASS ROUTE
PLAN AND PROFILE
STA. 0+000 - STA. 1+700

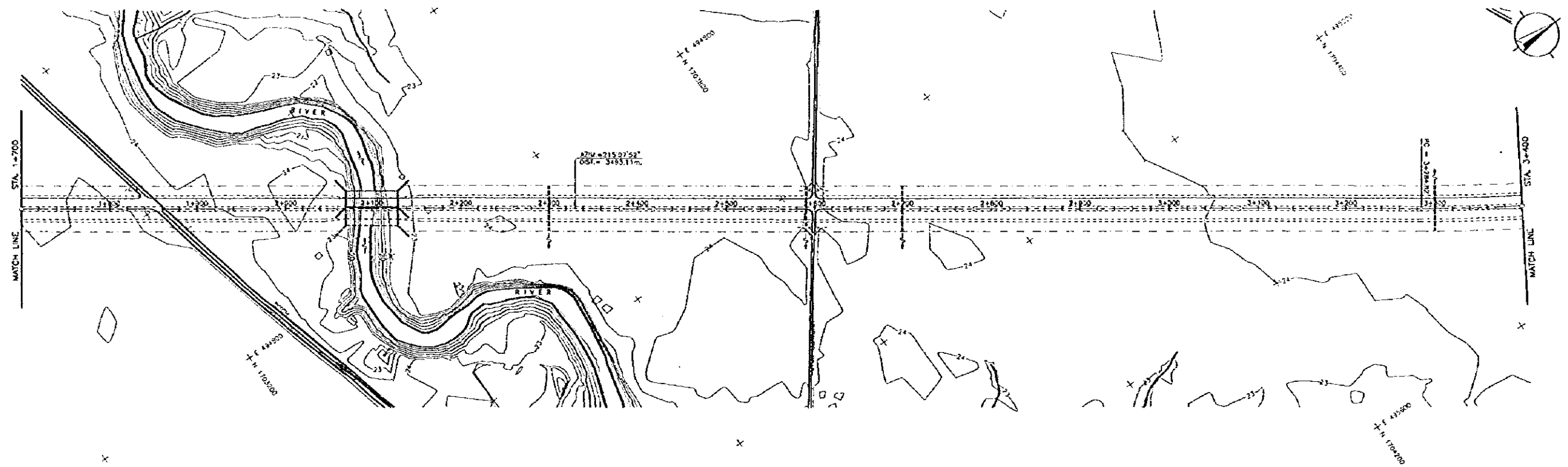
DRAWING NO.

27/68

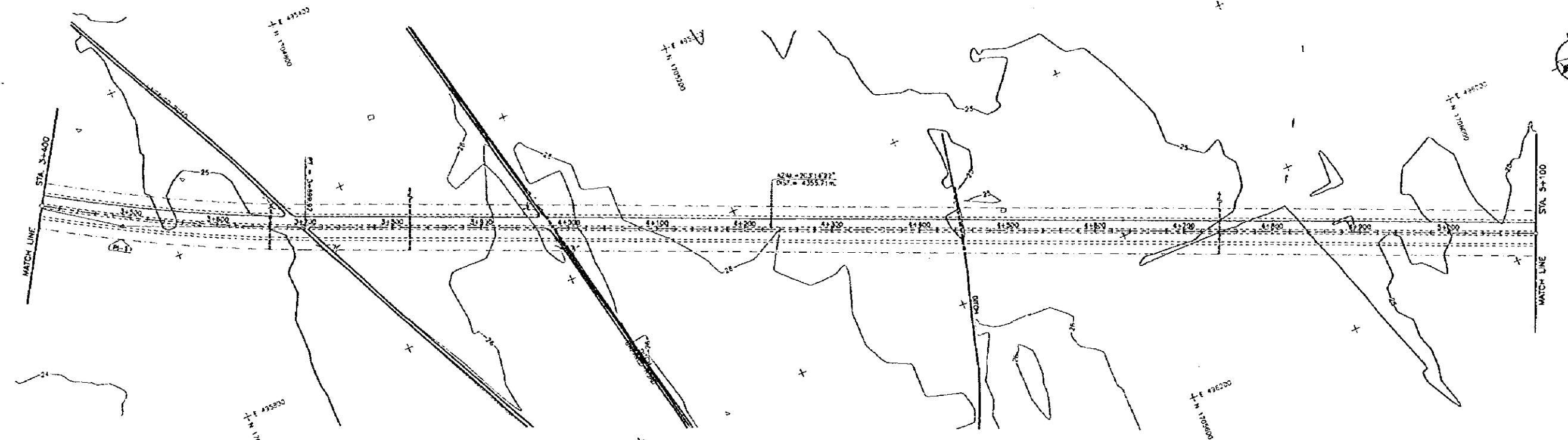


START OF CABANATUAN BYPASS
STA. 0+000.00
N = 1,701,698.34
E = 493,534.30
ELEV. = 24.29

ELEVATION	STATION	FINISHED GRADE	ORIGINAL GROUND	HORIZONTAL CURVATURE	VERTICAL CURVATURE
30.00	0+000	24.29	24.34		
	0+100	24.23	22.92		LVC = 80.00
	0+200	24.17	22.52		
	0+300	24.11	22.13		
	0+400	24.06	22.58		
	0+500	24.05	22.69		
	0+600	24.06	22.80		
	0+700	24.11	22.88		
	0+800	24.17	22.88		
	0+900	24.23	23.15		
	1+000	24.29	22.75		
	1+100	24.35	22.64		
	1+200	24.41	22.62		
	1+300	24.47	22.01		
	1+400	24.53	21.83		
	1+500	24.58	22.11		
	1+600	24.65	21.87		
	1+700	24.71	21.87		
	1+800	24.77	21.87		
	1+900	24.83	21.87		
	2+000	24.88	22.35		
	2+100	24.92	22.37		
	2+200	24.98	22.70		
	2+300	25.02	22.76		
	2+400	25.04	22.99		
	2+500	25.06	23.08		
	2+600	25.07	23.11		
	2+700	25.07	23.05		
	2+800	25.07	23.11		
	2+900	25.08	23.19		
	3+000	25.04	23.04		
	3+100	25.02	23.04		
	3+200	24.98	22.75		
	3+300	24.98	22.90		
	3+400	24.92	23.11		
	3+500	24.88	23.03		
	3+600	24.83	23.26		
	3+700	24.77	23.10		
	3+800	24.71	23.15		
	3+900	24.65	23.13		
	4+000	24.58	22.89		
	4+100	24.53	22.70		
	4+200	24.47	22.42		
	4+300	24.41	22.55		
	4+400	24.35	22.08		
	4+500	24.29	22.71		
	4+600	24.23	22.75		
	4+700	24.17	22.74		
	4+800	24.11	22.31		
	4+900	24.05	22.45		
	5+000	23.99	22.77		
	5+100	23.93	22.65		
	5+200	23.87	22.95		
	5+300	23.82	23.05		
	5+400	23.81	23.12		
	5+500	23.82	23.14		
	5+600	23.87	23.15		
	5+700	23.93	23.18		
	5+800	23.96	23.27		
	5+900	24.05	23.28		
	6+000	24.11	23.23		
	6+100	24.17	23.20		
	6+200	24.23	23.16		
	6+300	24.29	23.16		
	6+400	24.35	23.15		
	6+500	24.41	23.14		
	6+600	24.47	23.13		
	6+700	24.53	23.17		
	6+800	24.58	23.19		
	6+900	24.65	23.21		
	7+000	24.71	23.10		
	7+100	24.77	22.99		
	7+200	24.83	22.96		
	7+300	24.89	23.00		
	7+400	24.95	23.02		
	7+500	25.01	23.03		
	7+600	25.07	22.87		
	7+700	25.13	22.95		
	7+800	25.19	22.96		
	7+900	25.25	23.06		
	8+000	25.31	23.16		
	8+100	25.37	23.46		
	8+200	25.43	23.85		
	8+300	25.49	23.85		
	8+400	25.55	24.07		

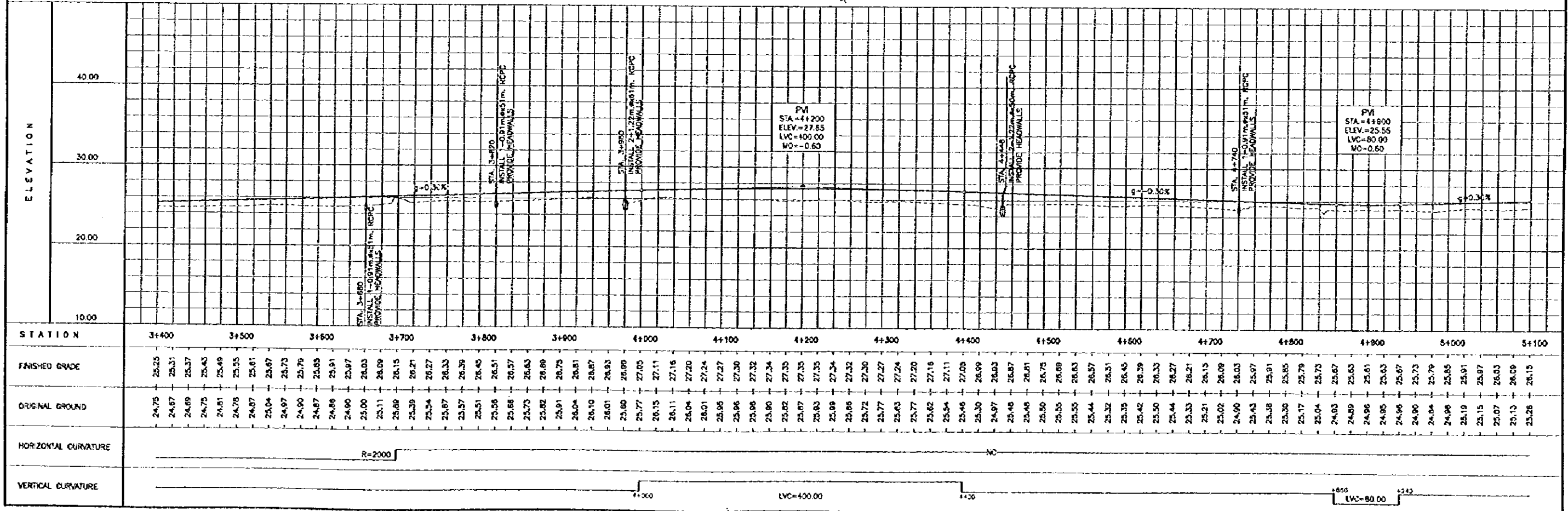


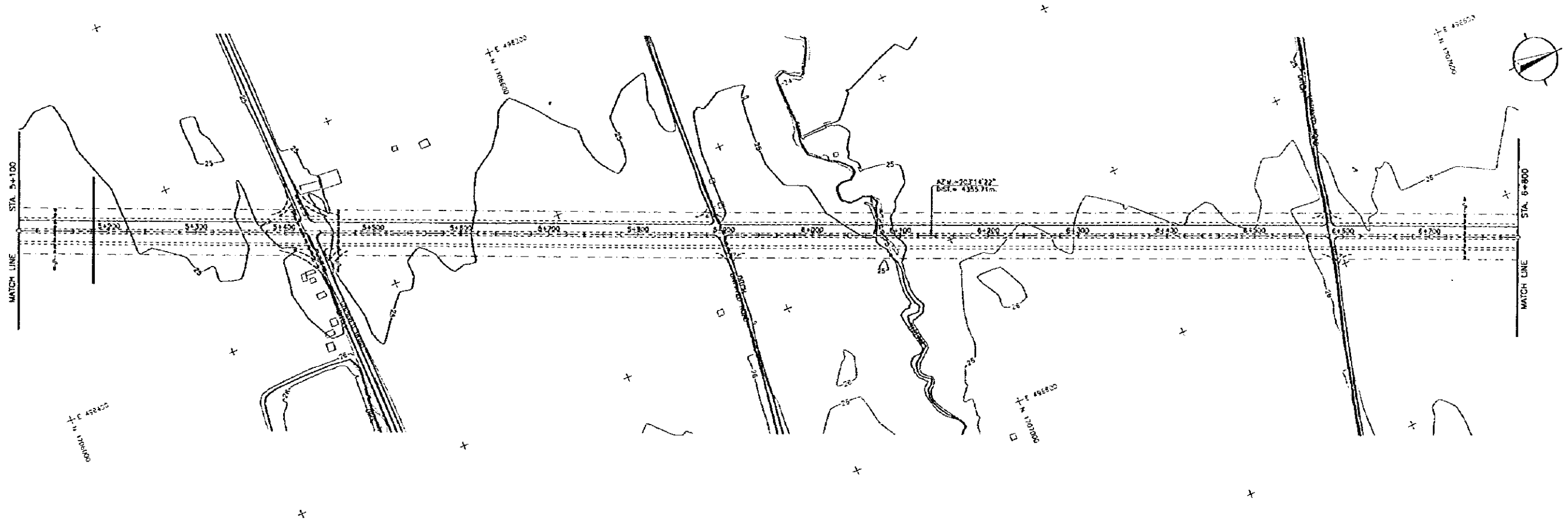
ELEVATION	STATION																																																																																																																																																					
	1+700	1+750	1+800	1+850	1+900	1+950	2+000	2+050	2+100	2+150	2+200	2+250	2+300	2+350	2+400	2+450	2+500	2+550	2+600	2+650	2+700	2+750	2+800	2+850	2+900	2+950	3+000	3+050	3+100	3+150	3+200	3+250	3+300	3+350	3+400																																																																																																																			
30.00																																																																																																																																																						
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10.00																																																																																																																																																						
0.00																																																																																																																																																						
FINISHED GRADE	24.07	25.55	24.06	25.61	24.04	25.67	23.97	25.73	23.90	25.79	23.91	25.85	24.07	25.91	24.26	25.98	24.63	26.00	24.38	26.04	24.23	26.07	24.03	26.10	23.83	26.12	23.82	26.14	23.85	26.15	24.05	26.15	24.12	26.15	23.78	26.14	23.76	26.14	23.76	26.12	19.53	26.10	18.25	26.07	22.05	26.04	23.32	25.98	23.76	25.91	23.52	25.86	23.76	25.91	23.85	25.79	23.82	25.75	23.81	25.61	23.78	25.35	23.71	25.49	23.89	25.43	23.72	25.37	23.80	25.31	23.84	24.89	23.82	24.83	23.70	24.77	23.91	24.71	24.62	24.65	23.80	24.59	23.77	24.53	23.79	24.47	23.83	24.41	23.90	24.33	23.87	24.29	23.90	24.23	23.85	24.17	23.67	24.11	23.86	24.05	23.75	23.99	23.76	23.93	23.77	23.87	23.79	23.84	23.85	23.82	23.84	24.11	23.85	24.17	24.14	24.23	24.11	24.29	24.26	24.35	24.31	24.41	24.29	24.47	24.26	24.53	24.26	24.59	24.27	24.65	24.22	24.71	24.26	24.77	24.31	24.83	24.26	24.89	24.22	24.95	24.33	25.01	24.51	25.07	24.57	25.13	24.86	25.19	24.75	25.25
ORIGINAL GROUND	24.07	25.55	24.06	25.61	24.04	25.67	23.97	25.73	23.90	25.79	23.91	25.85	24.07	25.91	24.26	25.98	24.63	26.00	24.38	26.04	24.23	26.07	24.03	26.10	23.83	26.12	23.82	26.14	23.85	26.15	24.05	26.15	24.12	26.15	23.78	26.14	23.76	26.14	23.76	26.12	19.53	26.10	18.25	26.07	22.05	26.04	23.32	25.98	23.76	25.91	23.52	25.86	23.76	25.91	23.85	25.79	23.82	25.75	23.81	25.61	23.78	25.35	23.71	25.49	23.89	25.43	23.72	25.37	23.80	25.31	23.84	24.89	23.82	24.83	23.70	24.77	23.91	24.71	24.62	24.65	23.80	24.59	23.77	24.53	23.79	24.47	23.83	24.41	23.90	24.33	23.87	24.29	23.90	24.23	23.85	24.17	23.67	24.11	23.86	24.05	23.75	23.99	23.76	23.93	23.77	23.87	23.79	23.84	23.85	23.82	23.84	24.11	23.85	24.17	24.14	24.23	24.11	24.29	24.26	24.35	24.31	24.41	24.29	24.47	24.26	24.53	24.26	24.59	24.27	24.65	24.22	24.71	24.26	24.77	24.31	24.83	24.26	24.89	24.22	24.95	24.33	25.01	24.51	25.07	24.57	25.13	24.86	25.19	24.75	25.25
HORIZONTAL CURVATURE	—																																																																																																																																																					
VERTICAL CURVATURE	+300										LVC=400.00										+200										+250 LVC=100.00 +250																																																																																																																							



ELEMENTS OF CURVE

P.L. NO.	STATION	COORDINATES OF P.L.		I	R	T	Lc	Ea
		NORTHING	EASTING					
P-1	3+493.11	1,704,553.14	495,544.42	-(1° 57' 35")	2,000.00	259.30	419.10	10.82





ELEVATION	STATION																			
	5+100	5+200	5+300	5+400	5+500	5+600	5+700	5+800	5+900	6+000	6+100	6+200	6+300	6+400	6+500	6+600	6+700	6+800		
40.00																				
30.00																				
20.00																				
10.00																				
FINISHED GRADE	26.15	26.21	26.27	26.33	26.39	26.45	26.51	26.57	26.63	26.69	26.75	26.81	26.87	26.93	26.99	27.05	27.11	27.17	27.23	
ORIGINAL GROUND	25.26	25.30	25.32	25.33	25.35	25.37	25.39	25.41	25.43	25.45	25.47	25.49	25.51	25.53	25.55	25.57	25.59	25.61	25.63	
HORIZONTAL CURVATURE	AC																			
VERTICAL CURVATURE	LVC = 400.00																			

STA. 5+140
INSTALL 1-0.31m x 0.31m RIPC
PROVIDE HEADWALLS

PM
STA = 5+440
ELEV. = 27.17
LVC = 400.00
MO = -0.60

STA. 5+420
INSTALL 2-1.22m x 0.31m RIPC
PROVIDE HEADWALLS

STA. 5+460
INSTALL 1-0.31m x 0.31m RIPC
PROVIDE HEADWALLS

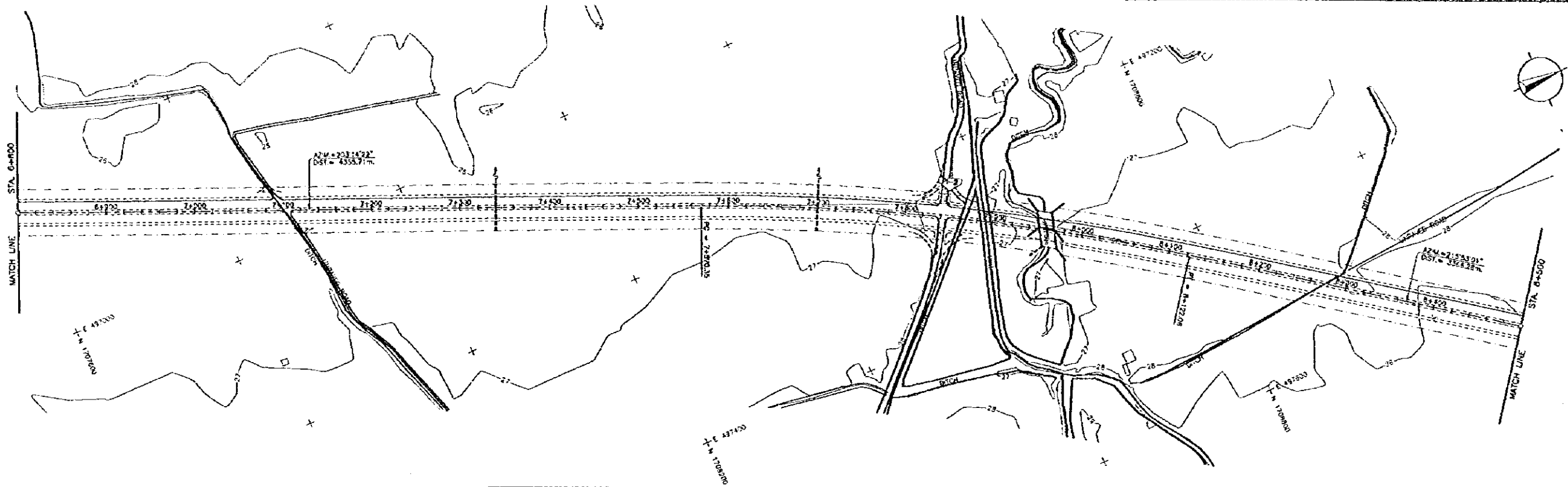
STA. 5+900
INSTALL 2-1.22m x 0.31m RIPC
PROVIDE HEADWALLS

PM
STA = 6+000
ELEV. = 25.49
LVC = 80.00
MO = 0.60

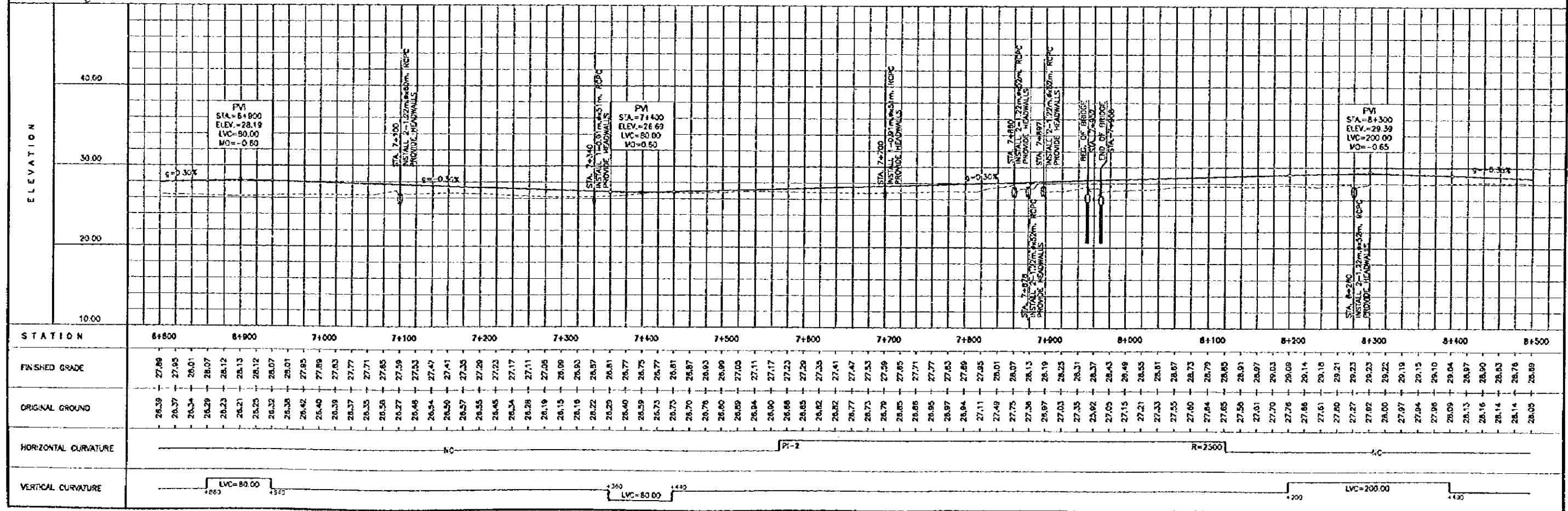
STA. 6+090
INSTALL 2-1.22m x 0.31m RIPC
PROVIDE HEADWALLS

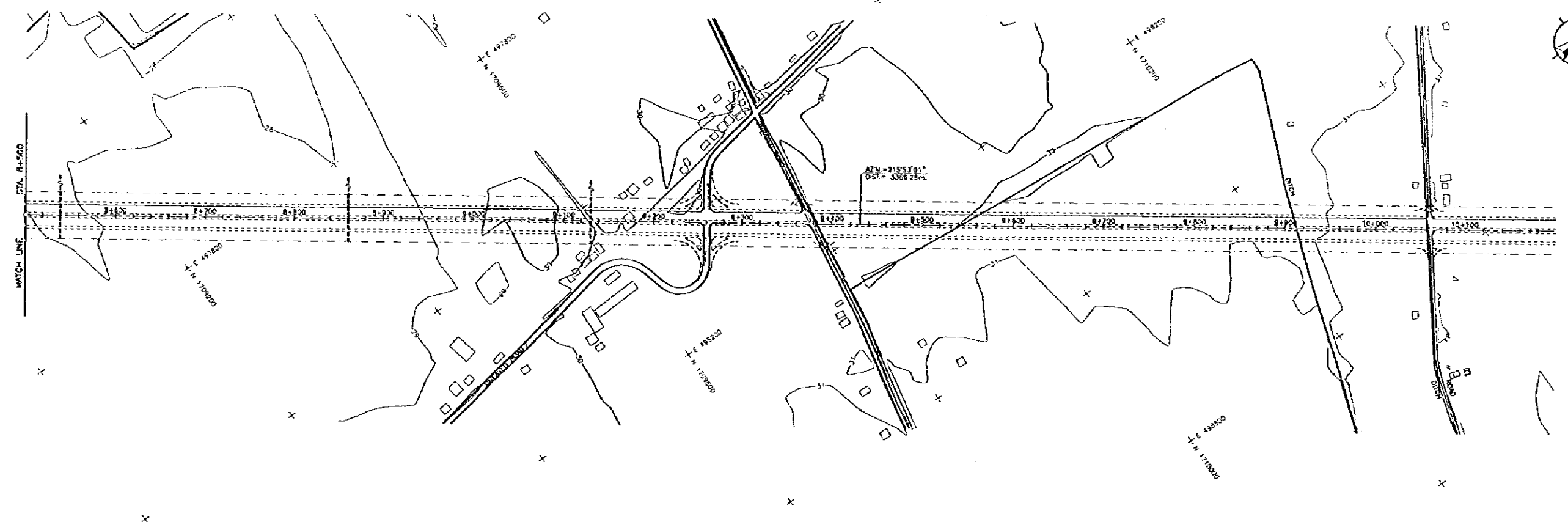
STA. 6+590
INSTALL 2-1.22m x 0.31m RIPC
PROVIDE HEADWALLS

STA. 6+740
INSTALL 1-0.31m x 0.31m RIPC
PROVIDE HEADWALLS



P.A. NO.	STATION	COORDINATES OF P.A.		I	R	T	Lc	Es
		NORTHINGS	EASTINGS					
P-2	7+847.33	1,728,555.45	487,253.97	12° 38' 38"	2,500.00	276.99	551.21	15.30



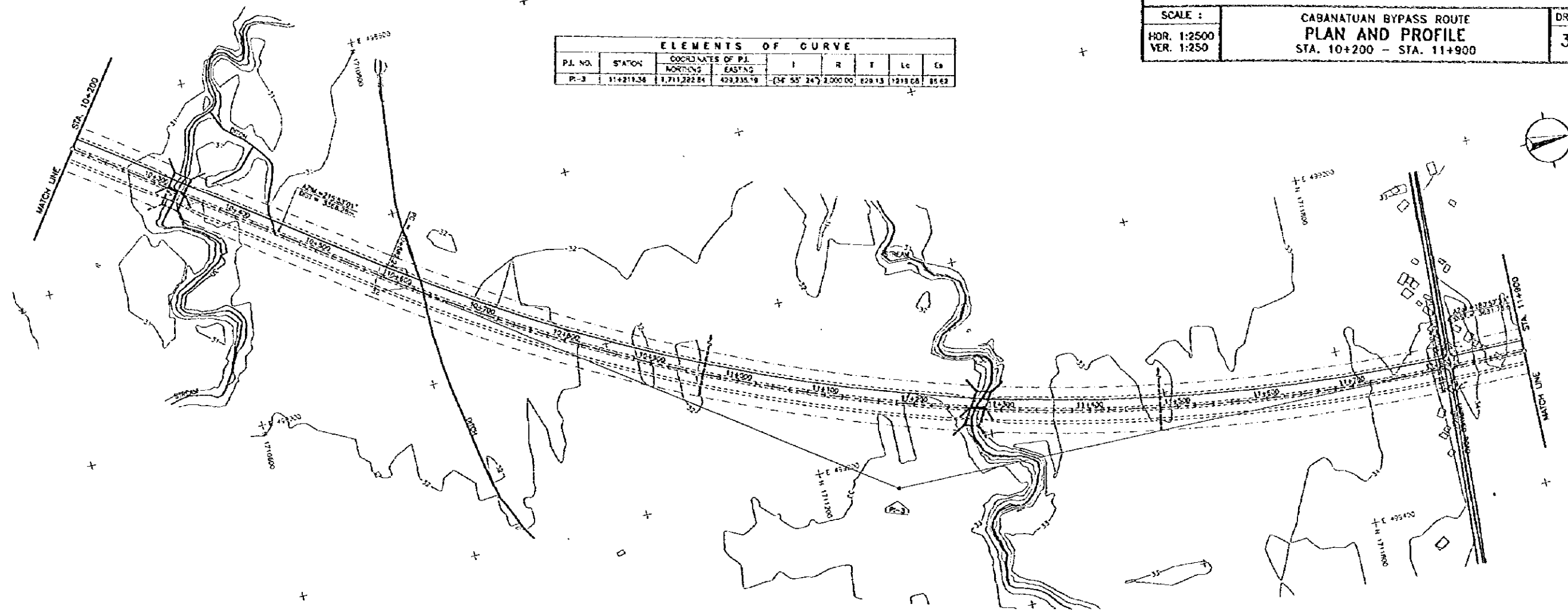


ELEVATION	STATION																																																																																																																																																													
	8+500	8+600	8+700	8+800	8+900	9+000	9+100	9+200	9+300	9+400	9+500	9+600	9+700	9+800	9+900	10+000	10+100	10+200																																																																																																																																												
40.00																																																																																																																																																														
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10.00																																																																																																																																																														
FINISHED GRADE	28.86	28.82	28.55	28.48	28.41	28.34	28.27	28.20	28.13	28.13	28.06	28.09	28.53	28.15	28.46	28.25	28.34	28.35	28.31	28.24	28.26	28.77	28.45	28.00	28.42	28.03	28.37	29.16	28.47	28.29	28.67	29.42	28.88	29.65	29.35	29.68	29.82	29.81	29.97	29.94	30.02	30.07	30.08	30.19	30.33	30.07	30.48	29.94	30.59	29.81	30.72	29.89	30.85	29.97	30.88	29.98	31.11	30.32	31.24	30.04	31.36	30.08	31.47	30.18	31.88	30.29	31.73	30.42	31.79	30.43	31.84	30.37	31.88	30.69	31.90	30.47	31.91	30.35	31.91	30.37	31.89	30.55	31.87	30.69	31.83	30.69	31.77	30.49	31.71	29.99	31.63	30.41	31.54	30.86	31.44	30.61	31.32	30.36	31.20	30.28	31.08	30.33	30.95	30.37	30.85	30.36	30.80	30.36	30.79	30.48	30.83	30.57	30.89	30.82	30.95	30.78	31.01	30.83	31.07	30.86	31.13	30.95	31.19	30.69	31.25	30.60	31.31	30.60	31.37	30.87	31.43	31.04	31.40	31.11	31.55	31.19	31.81	31.31	31.07	31.28	31.73	31.49	31.79	31.19	31.85	31.31	31.91	31.83	31.97	31.55	32.03	31.41	32.09	31.36	32.15	31.39	32.21	
ORIGINAL GROUND	28.05	27.85	27.68	27.69	28.08	28.17	28.34	28.14	28.27	28.13	28.13	28.06	28.09	28.53	28.15	28.46	28.25	28.34	28.35	28.31	28.24	28.26	28.77	28.45	28.00	28.42	28.03	28.37	29.16	28.47	28.29	28.67	29.42	28.88	29.65	29.35	29.68	29.82	29.81	29.97	29.94	30.02	30.07	30.08	30.19	30.33	30.07	30.48	29.94	30.59	29.81	30.72	29.89	30.85	29.97	30.88	29.98	31.11	30.32	31.24	30.04	31.36	30.08	31.47	30.18	31.88	30.29	31.73	30.42	31.79	30.43	31.84	30.37	31.88	30.69	31.90	30.47	31.91	30.35	31.91	30.37	31.89	30.55	31.87	30.69	31.83	30.69	31.77	30.49	31.71	29.99	31.63	30.41	31.54	30.86	31.44	30.61	31.32	30.36	31.20	30.28	31.08	30.33	30.95	30.37	30.85	30.36	30.80	30.36	30.79	30.48	30.83	30.57	30.89	30.82	30.95	30.78	31.01	30.83	31.07	30.86	31.13	30.95	31.19	30.69	31.25	30.60	31.31	30.60	31.37	30.87	31.43	31.04	31.40	31.11	31.55	31.19	31.81	31.31	31.07	31.28	31.73	31.49	31.79	31.19	31.85	31.31	31.91	31.83	31.97	31.55	32.03	31.41	32.09	31.36	32.15	31.39	32.21
HORIZONTAL CURVATURE	NC																																																																																																																																																													
VERTICAL CURVATURE																																																																																																																																																														

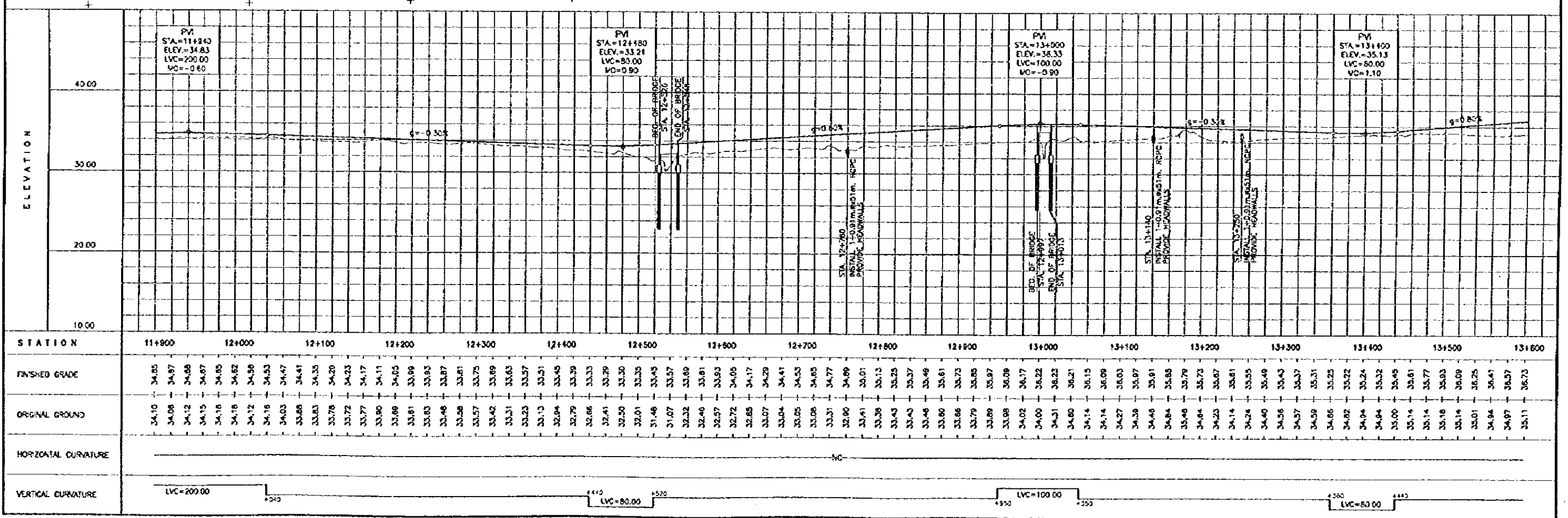
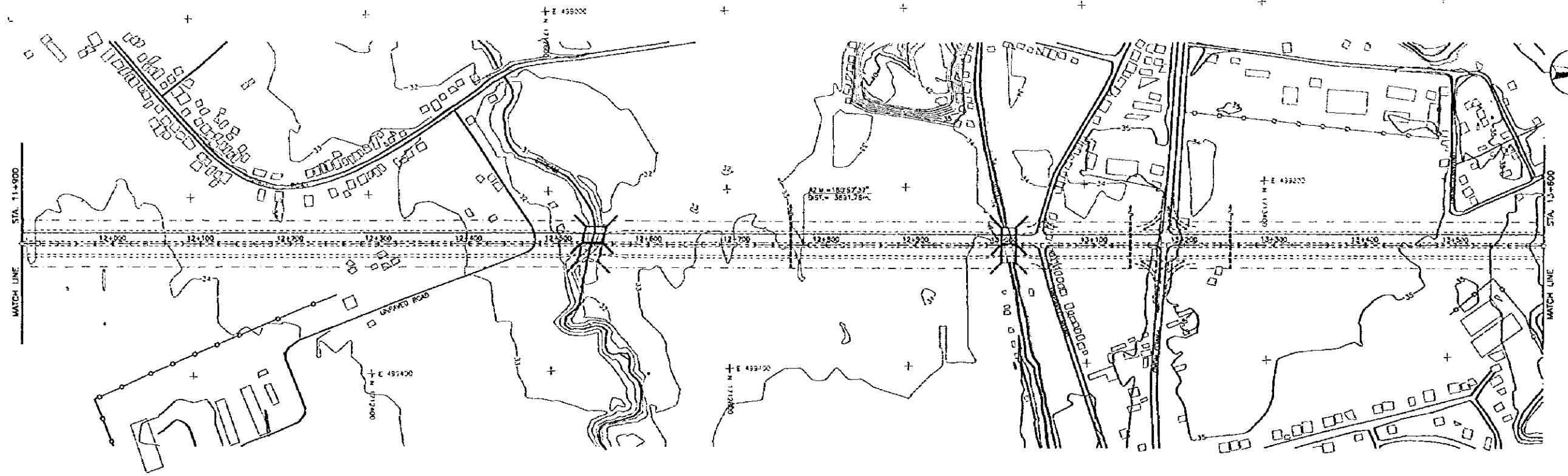
THE FEASIBILITY STUDY ON INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (STA. RITA, PLARIDEL-SAN JOSE SECTION)

SCALE : CABANATUAN BYPASS ROUTE
 PLAN AND PROFILE
 STA. 10+200 - STA. 11+900
 DRAWING NO. 33/68

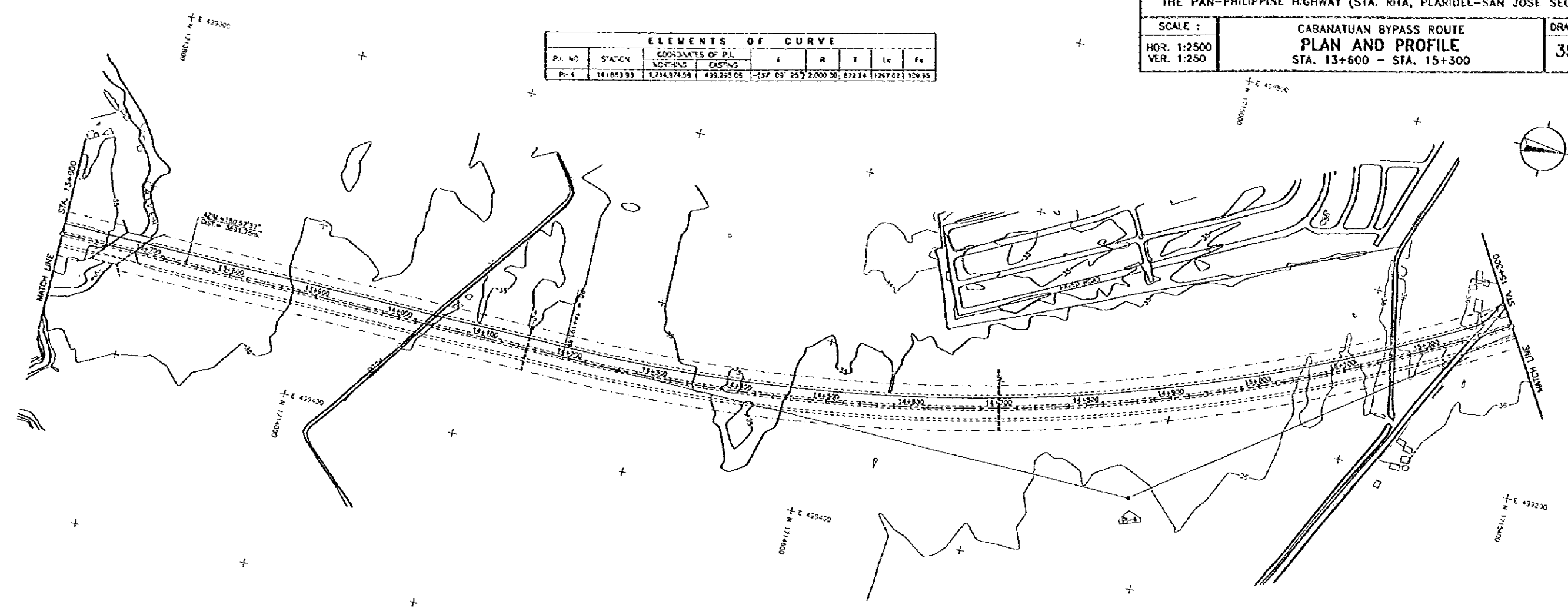
ELEMENTS OF CURVE								
P.I. NO.	STATION	COORDINATES OF P.I.		I	R	T	Lc	Es
		NORTHING	EASTING					
P-3	11+219.36	1,711,282.84	423,335.19	(-4° 55' 24")	2,000.00	429.13	1,019.08	85.62



ELEVATION	STATION																		
	10+200	10+300	10+400	10+500	10+600	10+700	10+800	10+900	11+000	11+100	11+200	11+300	11+400	11+500	11+600	11+700	11+800	11+900	
45.00																			
35.00																			
25.00																			
15.00																			
FINISHED GRADE	32.21	32.27	32.33	32.39	32.45	32.51	32.57	32.63	32.69	32.75	32.81	32.87	32.93	32.99	33.05	33.11	33.17	33.23	
ORIGINAL GROUND	31.39	31.42	31.53	31.09	30.94	30.89	30.86	31.11	31.04	31.32	31.29	31.33	31.31	31.27	31.49	31.57	31.76	31.84	31.85
HORIZONTAL CURVATURE	NC ————— P-3 ————— R=2000 ————— NC																		
VERTICAL CURVATURE	+340 LVC=120.00 +455 +650 LVC=100.00 +750 +250 LVC=80.00 +250 +330 LVC=80.00 +450 +530																		



P.I. NO.	STATION	COORDINATES OF P.I.		I	R	T	Lc	Ea
		NORTHING	EASTING					
P-4	14+053.93	1,714,874.08	493,295.05	(37° 09' 25")	2,000.00	672.84	1267.02	129.35



ELEVATION	STATION																	
	13+600	13+700	13+800	13+900	14+000	14+100	14+200	14+300	14+400	14+500	14+600	14+700	14+800	14+900	15+000	15+100	15+200	15+300
45.00																		
30.00																		
20.00																		
10.00																		
FINISHED GRADE	36.73	36.08	37.00	37.10	37.08	37.03	36.97	36.91	36.85	36.79	36.73	36.67	36.61	36.55	36.49	36.43	36.37	36.31
ORIGINAL GROUND	35.11	35.16	35.13	34.43	34.57	34.47	34.68	34.71	34.75	34.76	34.67	34.84	34.88	34.61	35.10	35.20	35.48	35.43
HORIZONTAL CURVATURE	P-4																	
VERTICAL CURVATURE	LVC=100.00				LVC=80.00								LVC=80.00				LVC=80.00	

PM
 STA=13+660
 ELEV.=37.21
 LVC=100.00
 WG=-1.10

PM
 STA=14+300
 ELEV.=35.29
 LVC=80.00
 WG=0.80

PM
 STA=14+700
 ELEV.=36.49
 LVC=80.00
 WG=-0.60

PM
 STA=14+900
 ELEV.=35.69
 LVC=80.00
 WG=0.70

PM
 STA=15+200
 ELEV.=37.09
 LVC=80.00
 WG=-0.78

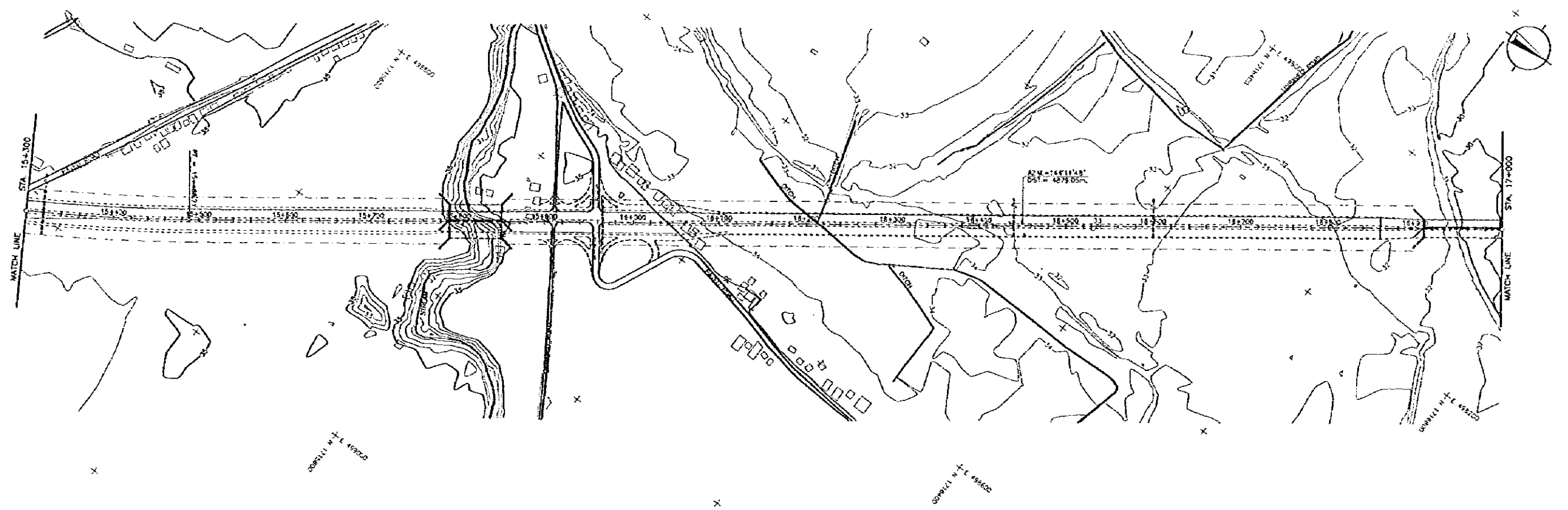
BEG. OF BRIDGE
 STA. 13+665
 END OF BRIDGE
 STA. 13+685

STA. 14+035
 PROVIDE HEADWALLS

STA. 14+230
 PROVIDE HEADWALLS

STA. 14+700
 PROVIDE HEADWALLS

STA. 15+135
 PROVIDE HEADWALLS



ELEVATION	STATION																			
	15+300	15+400	15+500	15+600	15+700	15+800	15+900	16+000	16+100	16+200	16+300	16+400	16+500	16+600	16+700	16+800	16+900	17+000		
40.00																				
30.00																				
20.00																				
10.00																				
FINISHED GRADE	36.71	36.83	36.95	37.07	37.19	37.31	37.43	37.55	37.67	37.79	37.91	38.03	38.15	38.27	38.39	38.51	38.63	38.75	38.87	
ORIGINAL GROUND	35.32	35.44	35.56	35.68	35.80	35.92	36.04	36.16	36.28	36.40	36.52	36.64	36.76	36.88	37.00	37.12	37.24	37.36	37.48	
HORIZONTAL CURVATURE	R=2000										NO									
VERTICAL CURVATURE	+140 LVC=80.00					+540 LVC=400.00					+200					+290 LVC=80.00				

PVI
STA=15+500
ELEV.=35.95
LVC=80.00
WD=0.68

PVI
STA=15+820
ELEV.=37.55
LVC=400.00
WD=-1.10

PVI
STA=16+330
ELEV.=34.85
LVC=80.00
WD=1.10

STA. 15+370
INSTALL 1-0.87m x 0.31m R.C.P.C.
PROVIDE HEADWALLS

HEAD OF BRIDGE
STA. 15+750

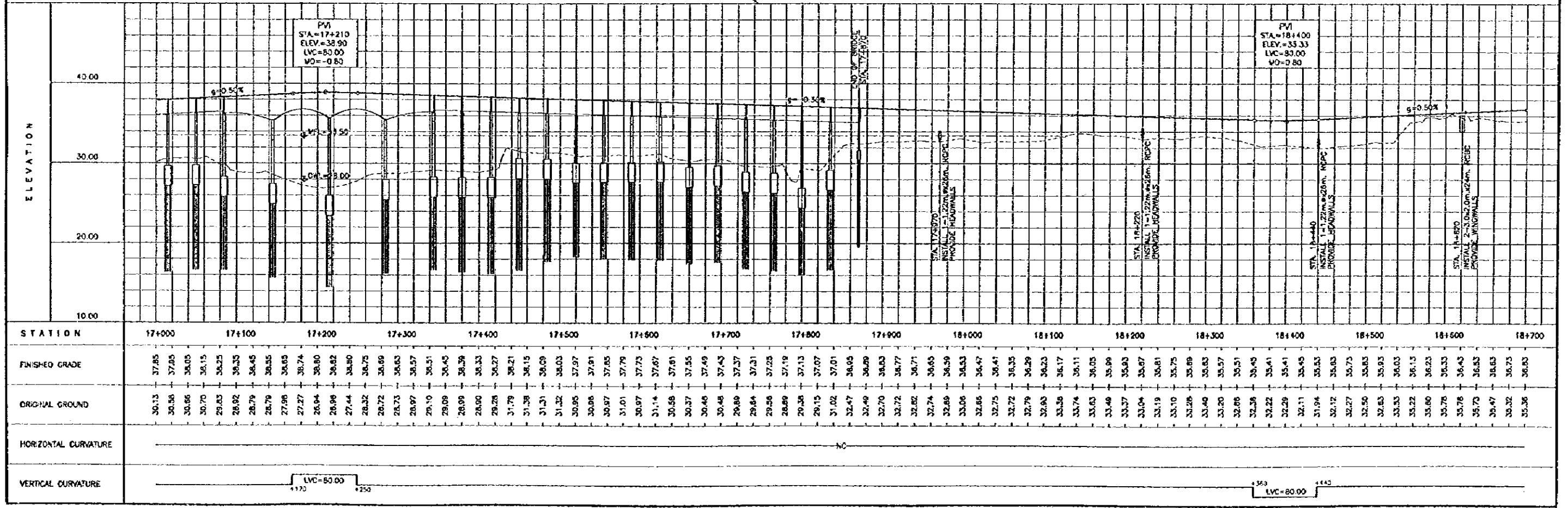
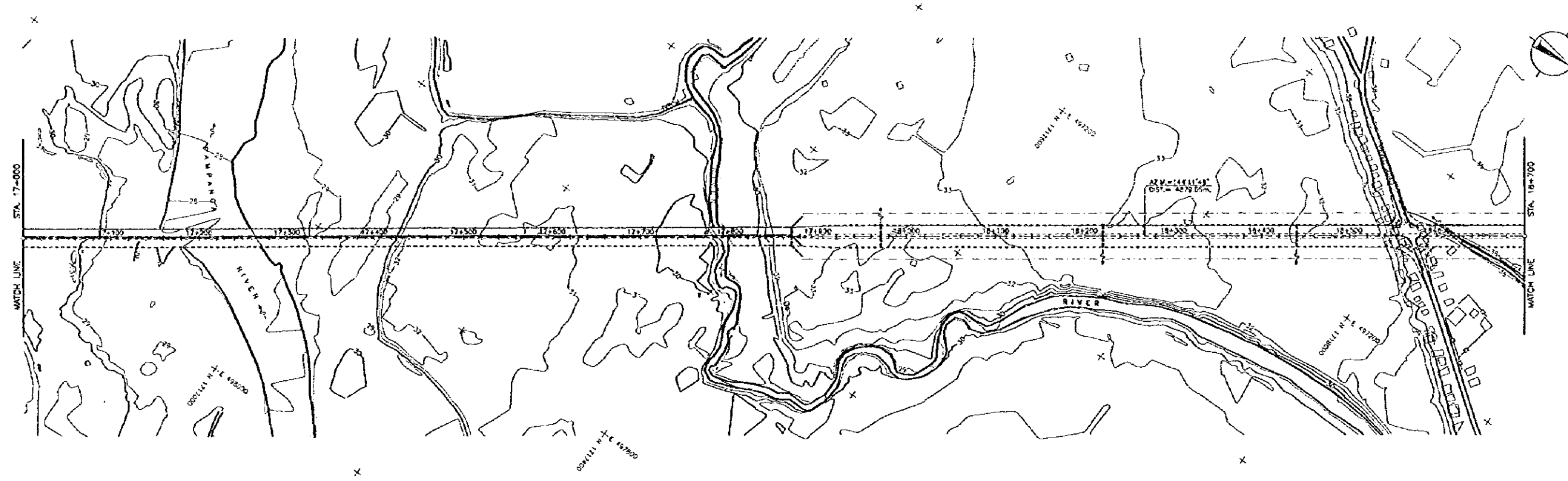
HEAD OF BRIDGE
STA. 15+2850

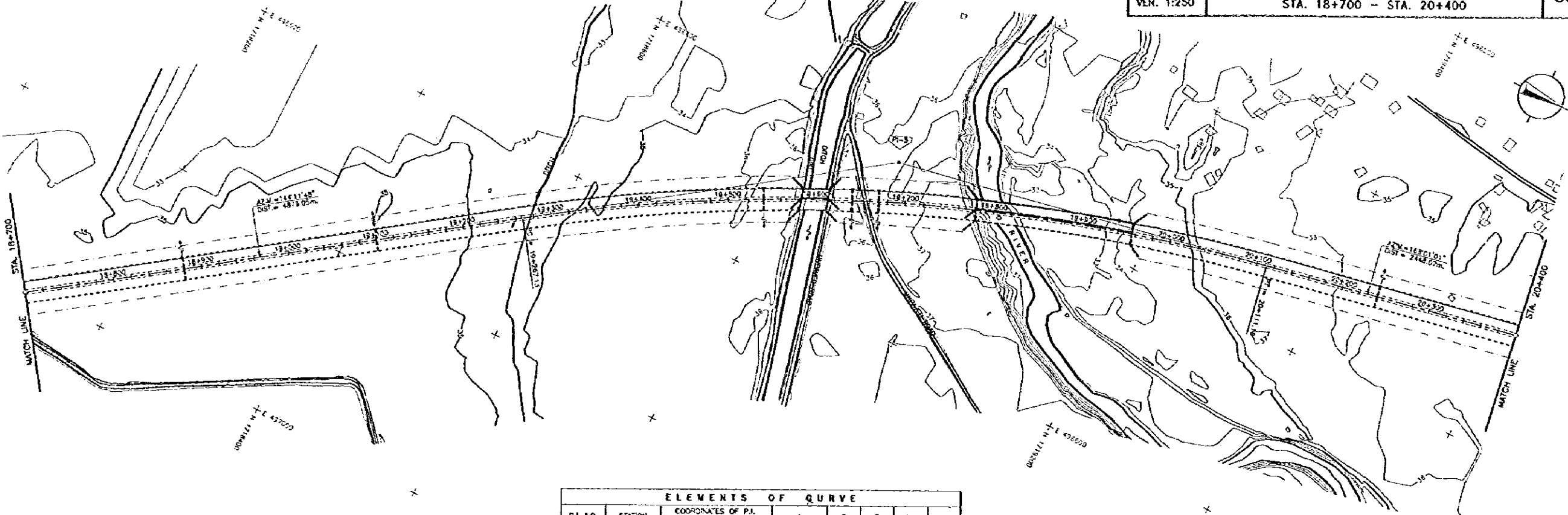
STA. 16+218
INSTALL 1-0.87m x 0.31m R.C.P.C.
PROVIDE HEADWALLS

STA. 16+440
INSTALL 1-1.22m x 0.20m R.C.P.C.
PROVIDE HEADWALLS

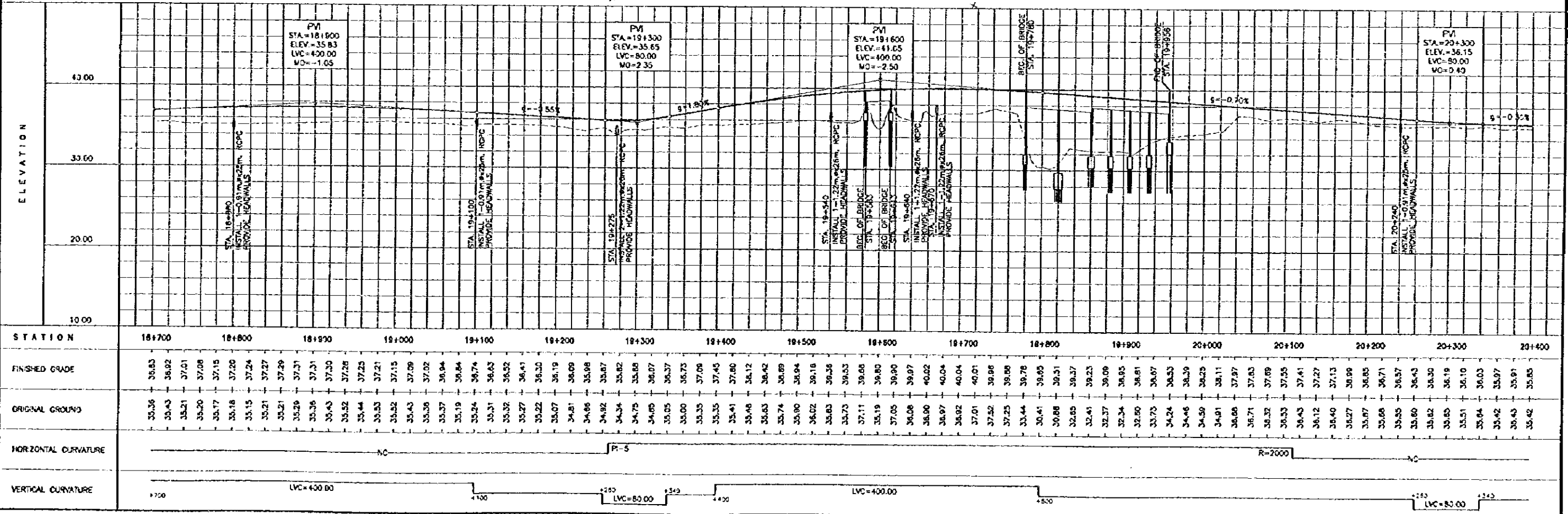
STA. 16+600
INSTALL 1-1.22m x 0.20m R.C.P.C.
PROVIDE HEADWALLS

HEAD OF BRIDGE
STA. 16+930

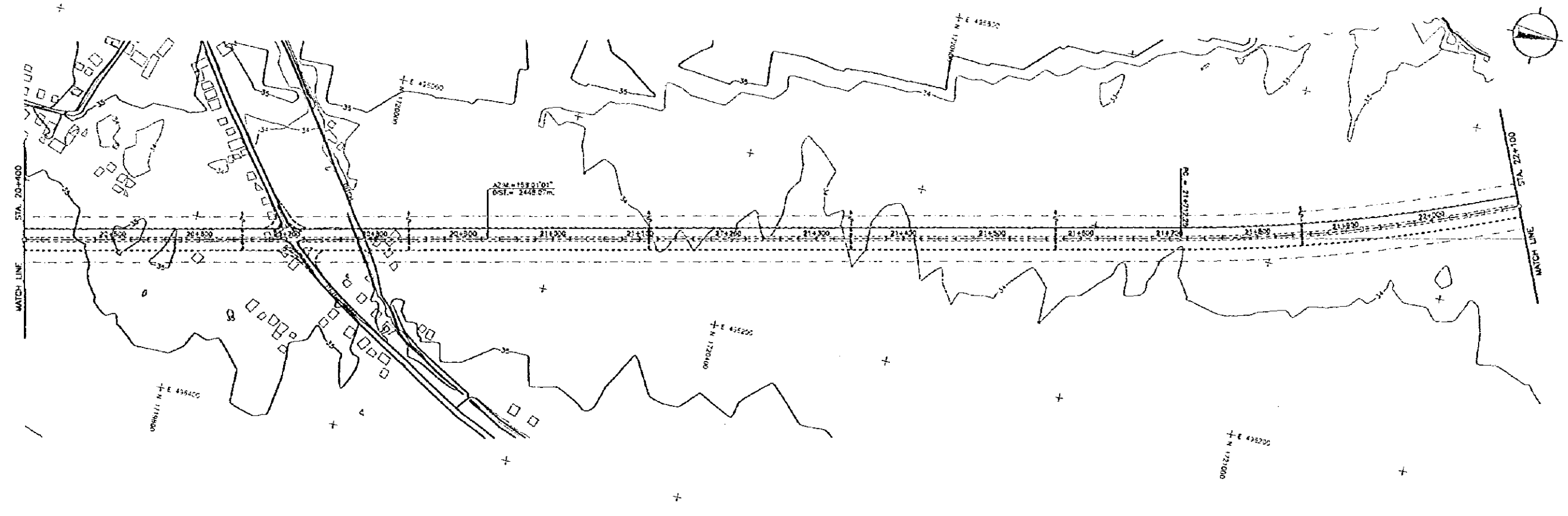




ELEMENTS OF CURVE								
P.I. NO.	STATION	COORDINATES OF P.I.		I	R	T	Lc	Ea
		NORTHING	EASTING					
PI-5	18+695.52	7,716,611.45	458,418.70	2° 10' 47"	2,000.00	428.50	844.03	45.37



STATION	18+700	18+800	18+900	19+000	19+100	19+200	19+300	19+400	19+500	19+600	19+700	19+800	19+900	20+000	20+100	20+200	20+300	20+400																																																																																																																																																																																																																																																																																																																																														
FINISHED GRADE	36.83	36.82	37.01	37.20	37.24	37.27	37.29	37.31	37.30	37.28	37.25	37.21	37.15	37.09	37.02	36.94	36.84	36.74	36.63	36.52	36.41	36.30	36.19	36.08	35.97	35.86	35.75	35.64	35.53	35.42	35.31	35.20	35.09	34.98	34.87	34.76	34.65	34.54	34.43	34.32	34.21	34.10	33.99	33.88	33.77	33.66	33.55	33.44	33.33	33.22	33.11	33.00	32.89	32.78	32.67	32.56	32.45	32.34	32.23	32.12	32.01	31.90	31.79	31.68	31.57	31.46	31.35	31.24	31.13	31.02	30.91	30.80	30.69	30.58	30.47	30.36	30.25	30.14	30.03	29.92	29.81	29.70	29.59	29.48	29.37	29.26	29.15	29.04	28.93	28.82	28.71	28.60	28.49	28.38	28.27	28.16	28.05	27.94	27.83	27.72	27.61	27.50	27.39	27.28	27.17	27.06	26.95	26.84	26.73	26.62	26.51	26.40	26.29	26.18	26.07	25.96	25.85	25.74	25.63	25.52	25.41	25.30	25.19	25.08	24.97	24.86	24.75	24.64	24.53	24.42	24.31	24.20	24.09	23.98	23.87	23.76	23.65	23.54	23.43	23.32	23.21	23.10	22.99	22.88	22.77	22.66	22.55	22.44	22.33	22.22	22.11	22.00	21.89	21.78	21.67	21.56	21.45	21.34	21.23	21.12	21.01	20.90	20.79	20.68	20.57	20.46	20.35	20.24	20.13	20.02	19.91	19.80	19.69	19.58	19.47	19.36	19.25	19.14	19.03	18.92	18.81	18.70	18.59	18.48	18.37	18.26	18.15	18.04	17.93	17.82	17.71	17.60	17.49	17.38	17.27	17.16	17.05	16.94	16.83	16.72	16.61	16.50	16.39	16.28	16.17	16.06	15.95	15.84	15.73	15.62	15.51	15.40	15.29	15.18	15.07	14.96	14.85	14.74	14.63	14.52	14.41	14.30	14.19	14.08	13.97	13.86	13.75	13.64	13.53	13.42	13.31	13.20	13.09	12.98	12.87	12.76	12.65	12.54	12.43	12.32	12.21	12.10	11.99	11.88	11.77	11.66	11.55	11.44	11.33	11.22	11.11	11.00	10.89	10.78	10.67	10.56	10.45	10.34	10.23	10.12	10.01	9.90	9.79	9.68	9.57	9.46	9.35	9.24	9.13	9.02	8.91	8.80	8.69	8.58	8.47	8.36	8.25	8.14	8.03	7.92	7.81	7.70	7.59	7.48	7.37	7.26	7.15	7.04	6.93	6.82	6.71	6.60	6.49	6.38	6.27	6.16	6.05	5.94	5.83	5.72	5.61	5.50	5.39	5.28	5.17	5.06	4.95	4.84	4.73	4.62	4.51	4.40	4.29	4.18	4.07	3.96	3.85	3.74	3.63	3.52	3.41	3.30	3.19	3.08	2.97	2.86	2.75	2.64	2.53	2.42	2.31	2.20	2.09	1.98	1.87	1.76	1.65	1.54	1.43	1.32	1.21	1.10	0.99	0.88	0.77	0.66	0.55	0.44	0.33	0.22	0.11	0.00
ORIGINAL GROUND	35.36	35.43	35.21	35.20	35.15	35.21	35.29	35.31	35.30	35.28	35.25	35.21	35.15	35.09	35.02	34.94	34.84	34.74	34.63	34.52	34.41	34.30	34.19	34.08	33.97	33.86	33.75	33.64	33.53	33.42	33.31	33.20	33.09	32.98	32.87	32.76	32.65	32.54	32.43	32.32	32.21	32.10	31.99	31.88	31.77	31.66	31.55	31.44	31.33	31.22	31.11	31.00	30.89	30.78	30.67	30.56	30.45	30.34	30.23	30.12	30.01	29.90	29.79	29.68	29.57	29.46	29.35	29.24	29.13	29.02	28.91	28.80	28.69	28.58	28.47	28.36	28.25	28.14	28.03	27.92	27.81	27.70	27.59	27.48	27.37	27.26	27.15	27.04	26.93	26.82	26.71	26.60	26.49	26.38	26.27	26.16	26.05	25.94	25.83	25.72	25.61	25.50	25.39	25.28	25.17	25.06	24.95	24.84	24.73	24.62	24.51	24.40	24.29	24.18	24.07	23.96	23.85	23.74	23.63	23.52	23.41	23.30	23.19	23.08	22.97	22.86	22.75	22.64	22.53	22.42	22.31	22.20	22.09	21.98	21.87	21.76	21.65	21.54	21.43	21.32	21.21	21.10	20.99	20.88	20.77	20.66	20.55	20.44	20.33	20.22	20.11	20.00	19.89	19.78	19.67	19.56	19.45	19.34	19.23	19.12	19.01	18.90	18.79	18.68	18.57	18.46	18.35	18.24	18.13	18.02	17.91	17.80	17.69	17.58	17.47	17.36	17.25	17.14	17.03	16.92	16.81	16.70	16.59	16.48	16.37	16.26	16.15	16.04	15.93	15.82	15.71	15.60	15.49	15.38	15.27	15.16	15.05	14.94	14.83	14.72	14.61	14.50	14.39	14.28	14.17	14.06	13.95	13.84	13.73	13.62	13.51	13.40	13.29	13.18	13.07	12.96	12.85	12.74	12.63	12.52	12.41	12.30	12.19	12.08	11.97	11.86	11.75	11.64	11.53	11.42	11.31	11.20	11.09	10.98	10.87	10.76	10.65	10.54	10.43	10.32	10.21	10.10	9.99	9.88	9.77	9.66	9.55	9.44	9.33	9.22	9.11	9.00	8.89	8.78	8.67	8.56	8.45	8.34	8.23	8.12	8.01	7.90	7.79	7.68	7.57	7.46	7.35	7.24	7.13	7.02	6.91	6.80	6.69	6.58	6.47	6.36	6.25	6.14	6.03	5.92	5.81	5.70	5.59	5.48	5.37	5.26	5.15	5.04	4.93	4.82	4.71	4.60	4.49	4.38	4.27	4.16	4.05	3.94	3.83	3.72	3.61	3.50	3.39	3.28	3.17	3.06	2.95	2.84	2.73	2.62	2.51	2.40	2.29	2.18	2.07	1.96	1.85	1.74	1.63	1.52	1.41	1.30	1.19	1.08	0.97	0.86	0.75	0.64	0.53	0.42	0.31	0.20	0.09	0.00																		
HORIZONTAL CURVATURE	NC																		PI-5										R=2000										NC																																																																																																																																																																																																																																																																																																																									
VERTICAL CURVATURE	+700																		LVC=400.00										+100										LVC=80.00										+500										LVC=80.00										+140																																																																																																																																																																																																																																																																																											

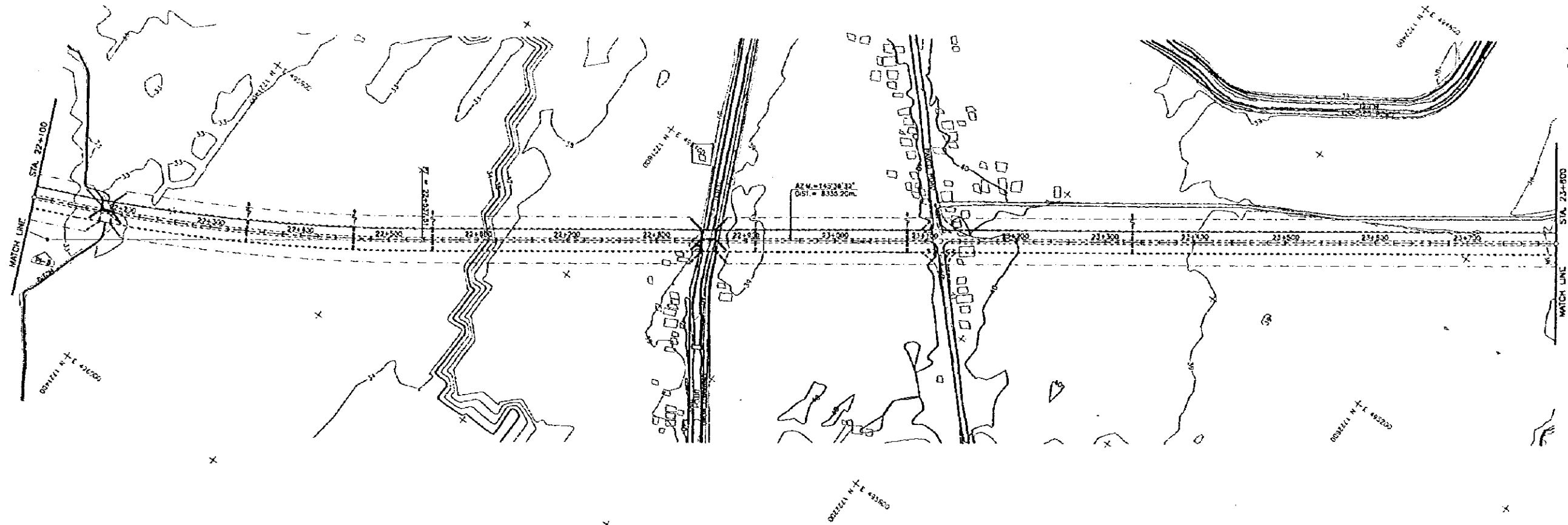


ELEVATION	STATION																			
	20+400	20+500	20+600	20+700	20+800	20+900	21+000	21+100	21+200	21+300	21+400	21+500	21+600	21+700	21+800	21+900	22+000	22+100		
40.00																				
30.00																				
20.00																				
10.00																				
FINISHED GRADE	33.85	33.79	33.73	33.67	33.61	33.55	33.49	33.43	33.37	33.31	33.25	33.19	33.13	33.07	33.02	32.96	32.90	32.84	32.78	
ORIGINAL GROUND	35.42	35.37	35.31	35.25	35.19	35.13	35.07	35.01	34.95	34.89	34.83	34.77	34.71	34.65	34.59	34.53	34.47	34.41	34.35	
HORIZONTAL CURVATURE	—																			
VERTICAL CURVATURE	LVC=80.00										LVC=80.00									

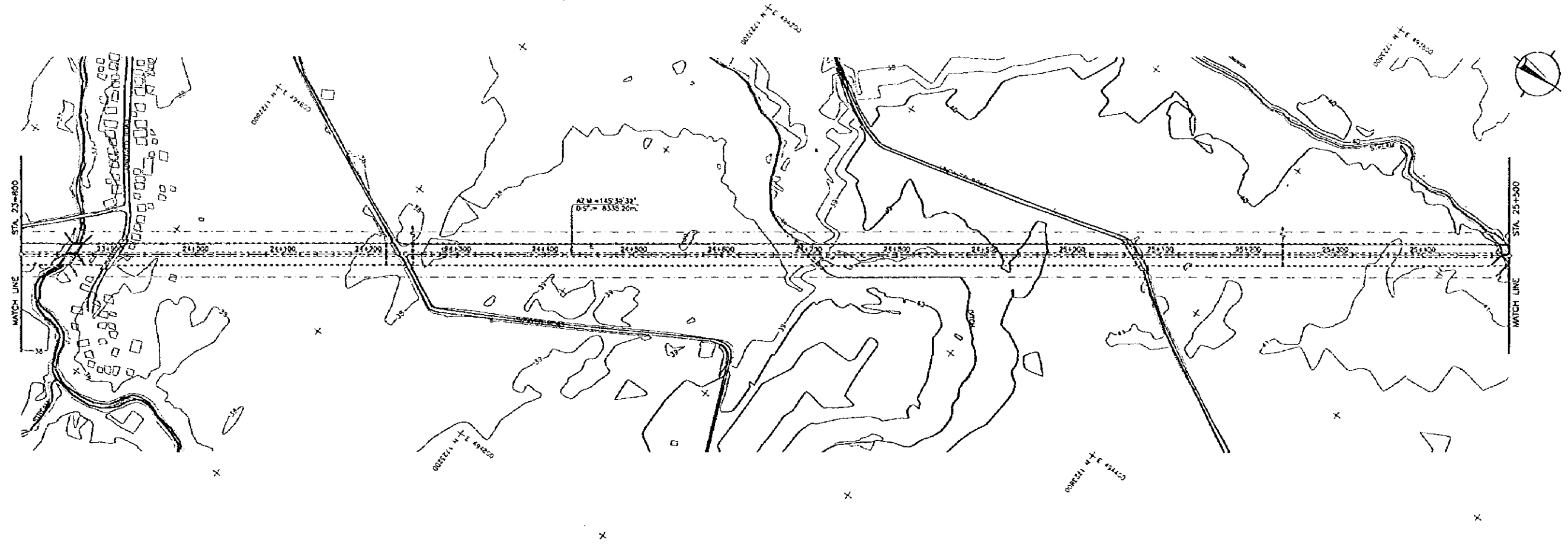
THE FEASIBILITY STUDY ON INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (STA. RITA, PLARIDEL-SAN JOSE SECTION)

SCALE :	CABANATUAN BYPASS ROUTE	DRAWING NO.
HOR. 1:2500	PLAN AND PROFILE	40/68
VER. 1:250	STA. 22+100 - STA. 23+800	

ELEMENTS OF CURVE								
PA. NO.	STATION	COORDINATES OF P.I.		I	R	T	Lc	Ex
		NORTHING	EASTING					
P-8	22+130.83	1,721,325.87	495,927.81	-27° 38' 31"	2,000.00	478.54	825.28	43.53

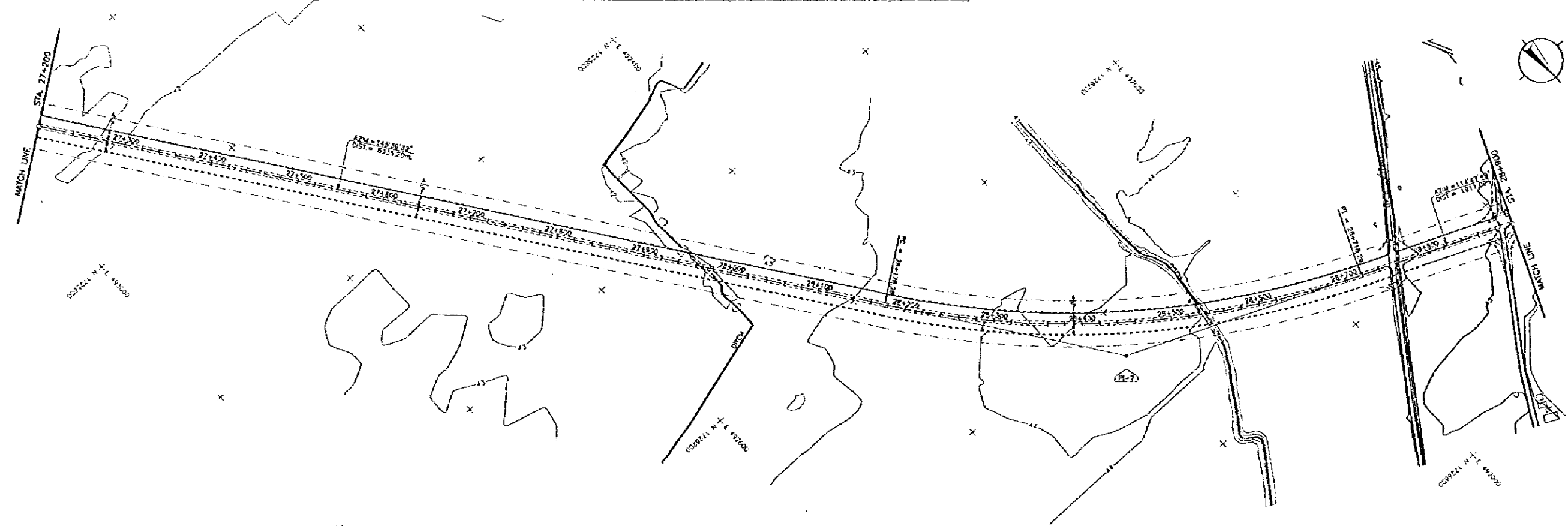


ELEVATION	STATION	FINISHED GRADE	ORIGINAL GROUND	HORIZONTAL CURVATURE	VERTICAL CURVATURE
50.00	22+100	34.71	33.40	R=2000	LVC=80.00
40.00	22+110	34.85	33.16		
30.00	22+120	34.39	33.08		
20.00	22+130	34.33	32.91		
	22+140	34.47	32.49		
	22+150	34.41	33.01		
	22+160	34.35	33.06		
	22+170	34.29	33.19		
	22+180	34.23	33.20		
	22+190	34.17	33.19		
	22+200	34.11	33.22		
	22+210	34.05	33.27		
	22+220	33.99	33.11		
	22+230	33.93	33.22		
	22+240	33.87	33.28		
	22+250	33.82	33.27		
	22+260	33.76	33.34		
	22+270	33.71	33.42		
	22+280	33.66	33.42		
	22+290	33.61	33.41		
	22+300	33.56	33.42		
	22+310	33.51	33.41		
	22+320	33.46	33.42		
	22+330	33.41	33.41		
	22+340	33.36	33.42		
	22+350	33.31	33.41		
	22+360	33.26	33.38		
	22+370	33.21	33.35		
	22+380	33.16	33.33		
	22+390	33.11	33.28		
	22+400	33.06	33.25		
	22+410	33.01	33.21		
	22+420	32.96	33.18		
	22+430	32.91	33.15		
	22+440	32.86	33.12		
	22+450	32.81	33.09		
	22+460	32.76	33.06		
	22+470	32.71	33.03		
	22+480	32.66	33.00		
	22+490	32.61	32.97		
	22+500	32.56	32.94		
	22+510	32.51	32.91		
	22+520	32.46	32.88		
	22+530	32.41	32.85		
	22+540	32.36	32.82		
	22+550	32.31	32.79		
	22+560	32.26	32.76		
	22+570	32.21	32.73		
	22+580	32.16	32.70		
	22+590	32.11	32.67		
	22+600	32.06	32.64		
	22+610	32.01	32.61		
	22+620	31.96	32.58		
	22+630	31.91	32.55		
	22+640	31.86	32.52		
	22+650	31.81	32.49		
	22+660	31.76	32.46		
	22+670	31.71	32.43		
	22+680	31.66	32.40		
	22+690	31.61	32.37		
	22+700	31.56	32.34		
	22+710	31.51	32.31		
	22+720	31.46	32.28		
	22+730	31.41	32.25		
	22+740	31.36	32.22		
	22+750	31.31	32.19		
	22+760	31.26	32.16		
	22+770	31.21	32.13		
	22+780	31.16	32.10		
	22+790	31.11	32.07		
	22+800	31.06	32.04		
	23+100	31.01	32.01		
	23+200	30.96	31.96		
	23+300	30.91	31.91		
	23+400	30.86	31.86		
	23+500	30.81	31.81		
	23+600	30.76	31.76		
	23+700	30.71	31.71		
	23+800	30.66	31.66		



ELEVATION	STATION																																																																																																								
	23+800	23+900	24+000	24+100	24+200	24+300	24+400	24+500	24+600	24+700	24+800	24+900	25+000	25+100	25+200	25+300	25+400	25+500																																																																																							
50.00																																																																																																									
40.00																																																																																																									
30.00																																																																																																									
20.00																																																																																																									
FINISHED GRADE	41.36	41.44	41.50	41.54	41.56	41.56	41.53	41.49	41.43	41.34	41.24	41.13	41.01	40.90	40.78	40.67	40.56	40.44	40.33	40.21	40.10	39.98	39.87	39.76	39.64	39.53	39.42	39.30	39.19	39.11	39.10	39.15	39.28	39.44	39.66	39.90	39.78	39.66	39.50	39.32	39.11	40.08	40.24	40.40	40.58	40.72	40.86	41.04	41.20	41.36	41.52	41.68	41.84	42.00	42.16	42.32	42.48	42.64	42.80	42.96	43.12	43.28	43.44	43.60	43.76	43.92	44.08	44.24	44.40	44.56	44.72	44.88	45.04	45.20	45.36	45.52	45.68	45.84	46.00	46.16	46.32	46.48	46.64	46.80	46.96	47.12	47.28	47.44	47.60	47.76	47.92	48.08	48.24	48.40	48.56	48.72	48.88	49.04	49.20	49.36	49.52	49.68	49.84	49.96	50.00
ORIGINAL GROUND	37.77	37.71	37.63	37.14	37.01	41.56	38.08	38.22	38.22	38.02	38.34	38.43	38.36	38.30	38.20	38.26	38.16	38.14	38.15	38.15	38.08	37.90	37.84	38.63	38.01	37.83	38.24	38.55	38.42	38.63	38.69	38.88	38.70	38.82	38.74	38.76	38.90	38.90	38.90	38.90	38.90	38.61	38.03	38.06	38.41	38.40	38.10	37.71	37.35	38.90	38.83	39.19	39.11	39.17	38.99	39.19	39.34	39.54	39.59	40.13	39.98	39.84	40.04	40.22	40.31	40.27	40.53	40.53	41.07	40.79	40.79	40.84	40.84	40.63	40.77	40.84	40.84	40.53	40.32	40.48	40.51	40.73	40.98	40.91	41.08	40.81	41.45	41.39	41.43	41.74	41.92	41.92	42.10												
HORIZONTAL CURVATURE	0°																																																																																																								
VERTICAL CURVATURE	1:200	LVC=200.00										1:360	LVC=80.00										1:440	1:530	LVC=200.00										1:190	1:360	LVC=80.00										1:410																																																										

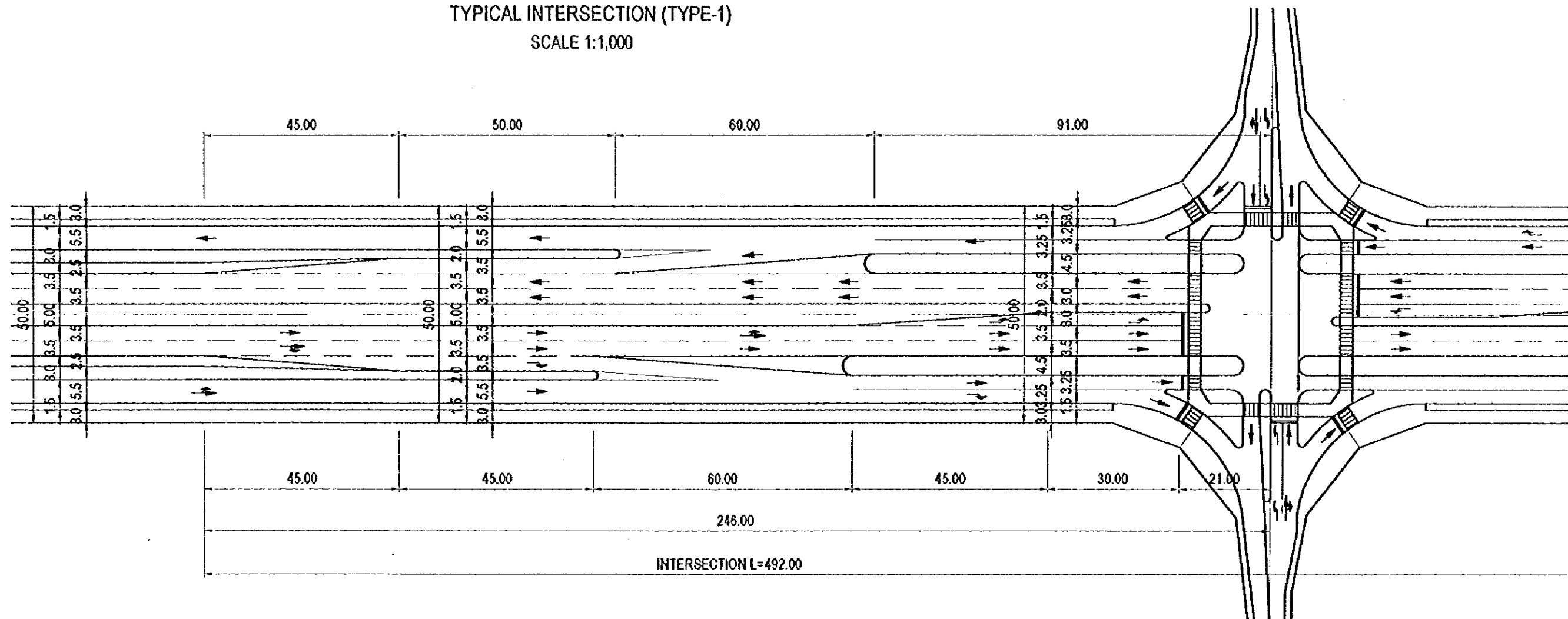
ELEMENTS OF CURVE						
P.I. NO.	STATION	COORDINATES OF P.I.		I	R	T
		NORTHING	EASTING			
PI-7	28+454.12	1,726,453.93	492,313.84	-31° 03' 17"	1,000.00	277.84



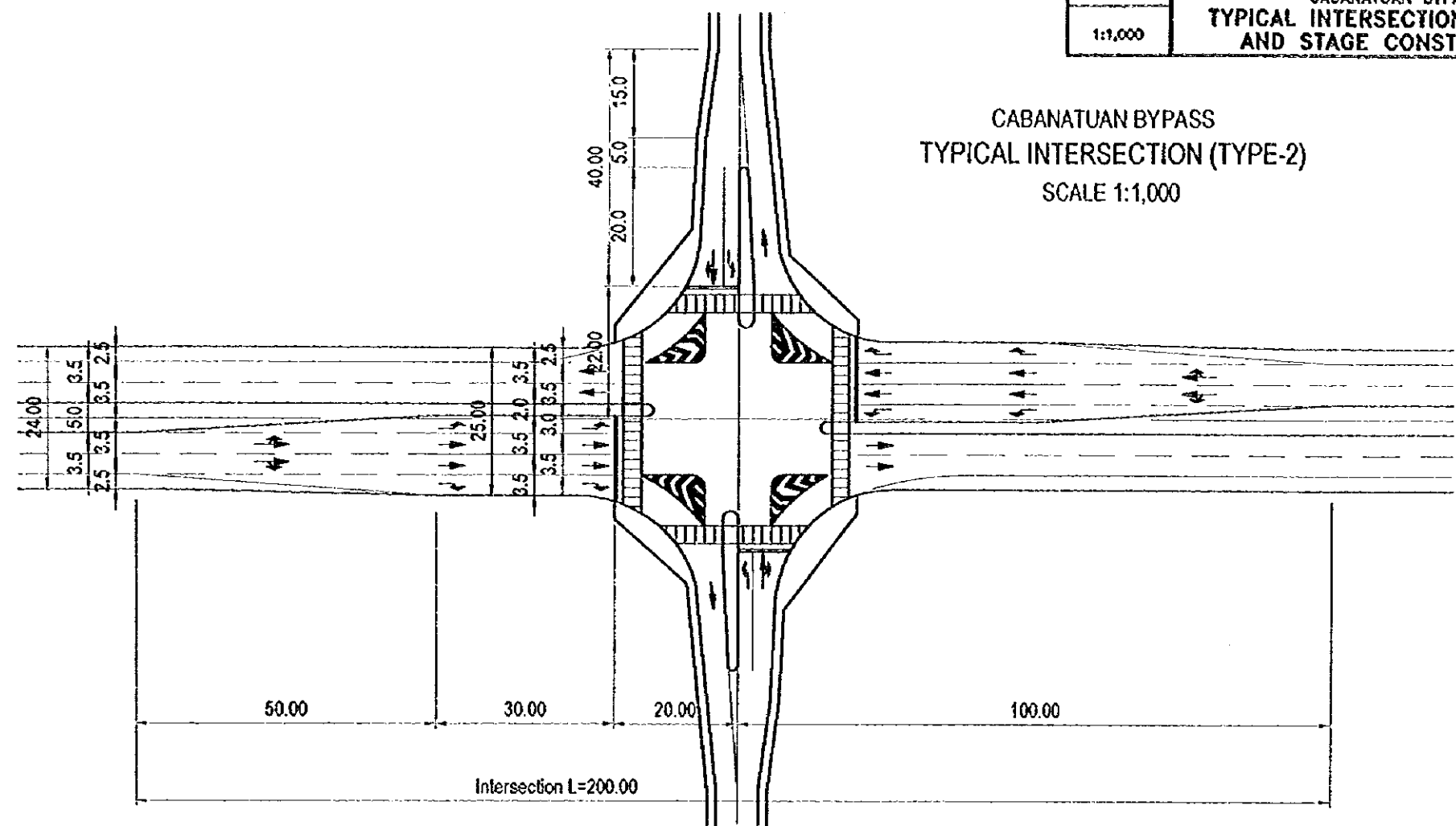
ELEVATION	STATION																																																																																																																																																																	
	27+200	27+300	27+400	27+500	27+600	27+700	27+800	27+900	28+000	28+100	28+200	28+300	28+400	28+500	28+600	28+700	28+800	28+900																																																																																																																																																
50.00																																																																																																																																																																		
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40.00																																																																																																																																																																		
35.00																																																																																																																																																																		
30.00																																																																																																																																																																		
25.00																																																																																																																																																																		
20.00																																																																																																																																																																		
FINISHED GRADE	42.34	42.60	42.66	42.72	42.78	42.84	42.90	42.96	43.02	43.08	43.14	43.20	43.26	43.32	43.38	43.44	43.50	43.56	43.62	43.68	43.74	43.80	43.86	43.92	43.98	44.04	44.10	44.16	44.22	44.28	44.34	44.40	44.46	44.52	44.58	44.64	44.70	44.76	44.82	44.88	44.94	45.00	45.06	45.12	45.18	45.24	45.30	45.36	45.42	45.48	45.54	45.60	45.66	45.72	45.78	45.84	45.90	45.96	46.02	46.08	46.14	46.20	46.26	46.32	46.38	46.44	46.50	46.56	46.62	46.68	46.74	46.80	46.86	46.92	46.98	47.04	47.10	47.16	47.22	47.28	47.34	47.40	47.46	47.52	47.58	47.64																																																																												
ORIGINAL GROUND	42.13	42.11	42.08	42.12	41.97	42.12	42.04	42.28	42.35	42.96	42.34	43.02	42.33	43.08	42.50	43.14	42.55	43.20	42.84	42.85	42.72	43.38	42.81	43.44	42.92	43.50	42.78	43.56	42.86	43.82	42.71	43.88	42.73	43.74	42.77	43.80	42.82	43.86	42.56	43.92	42.83	43.98	42.58	44.04	42.79	44.10	42.74	44.22	42.64	44.28	42.82	44.34	42.55	44.40	42.47	44.46	42.45	44.52	42.41	44.58	42.38	44.64	42.28	44.70	42.08	44.76	42.36	44.82	42.07	44.88	42.01	44.94	42.07	45.00	42.03	45.06	42.05	45.12	42.00	45.18	42.02	45.24	42.04	45.30	42.06	45.36	42.08	45.42	42.10	45.48	42.12	45.54	42.14	45.60	42.16	45.66	42.18	45.72	42.20	45.78	42.22	45.84	42.24	45.90	42.26	45.96	42.28	46.02	42.30	46.08	42.32	46.14	42.34	46.20	42.36	46.26	42.38	46.32	42.40	46.38	42.42	46.44	42.44	46.50	42.46	46.56	42.48	46.62	42.50	46.68	42.52	46.74	42.54	46.80	42.56	46.86	42.58	46.92	42.60	46.98	42.62	47.04	42.64	47.10	42.66	47.16	42.68	47.22	42.70	47.28	42.72	47.34	42.74	47.40	42.76	47.46	42.78	47.52	42.80	47.58	42.82	47.64
HORIZONTAL CURVATURE	NC																																																																																																																																																																	
VERTICAL CURVATURE	PI-7																																																																																																																																																																	

THE FEASIBILITY STUDY ON INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (STA. RITA, PLARIDEL-SAN JOSE SECTION)		
SCALE :	CABANATUAN BYPASS	DRAWING NO.
1:1,000	TYPICAL INTERSECTION (TYPE 1)	45/68

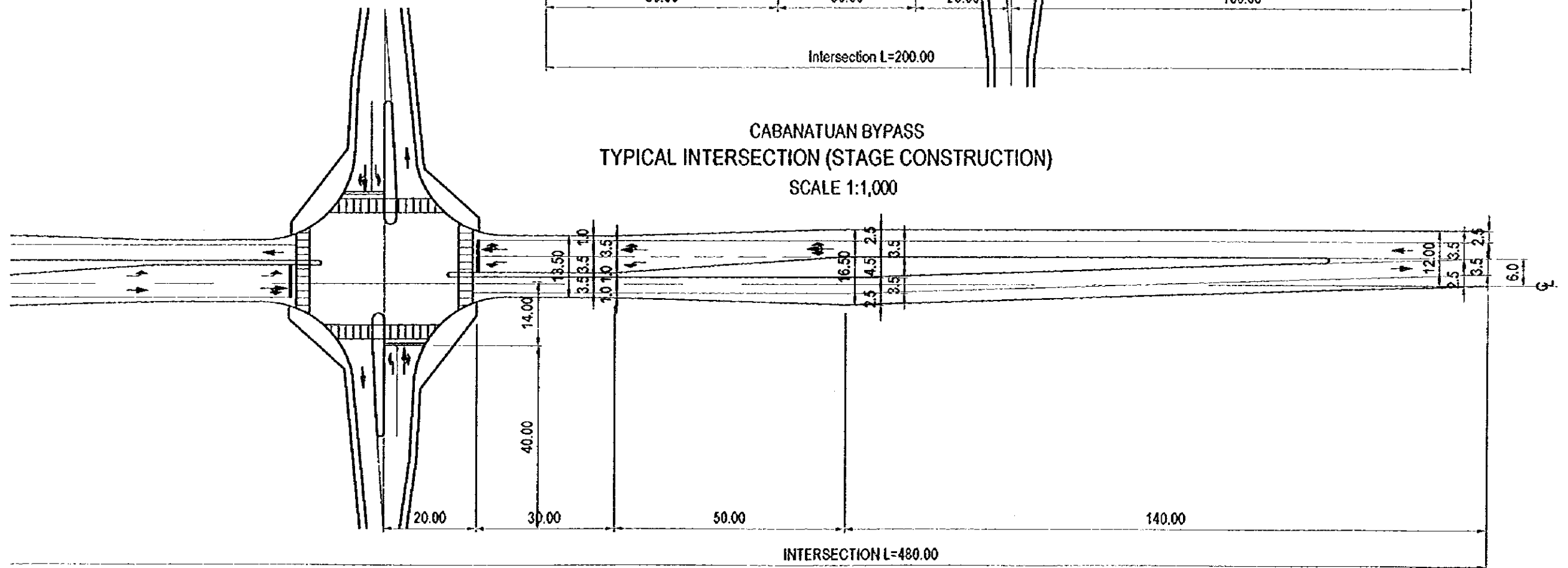
CABANATUAN BYPASS
TYPICAL INTERSECTION (TYPE-1)
SCALE 1:1,000



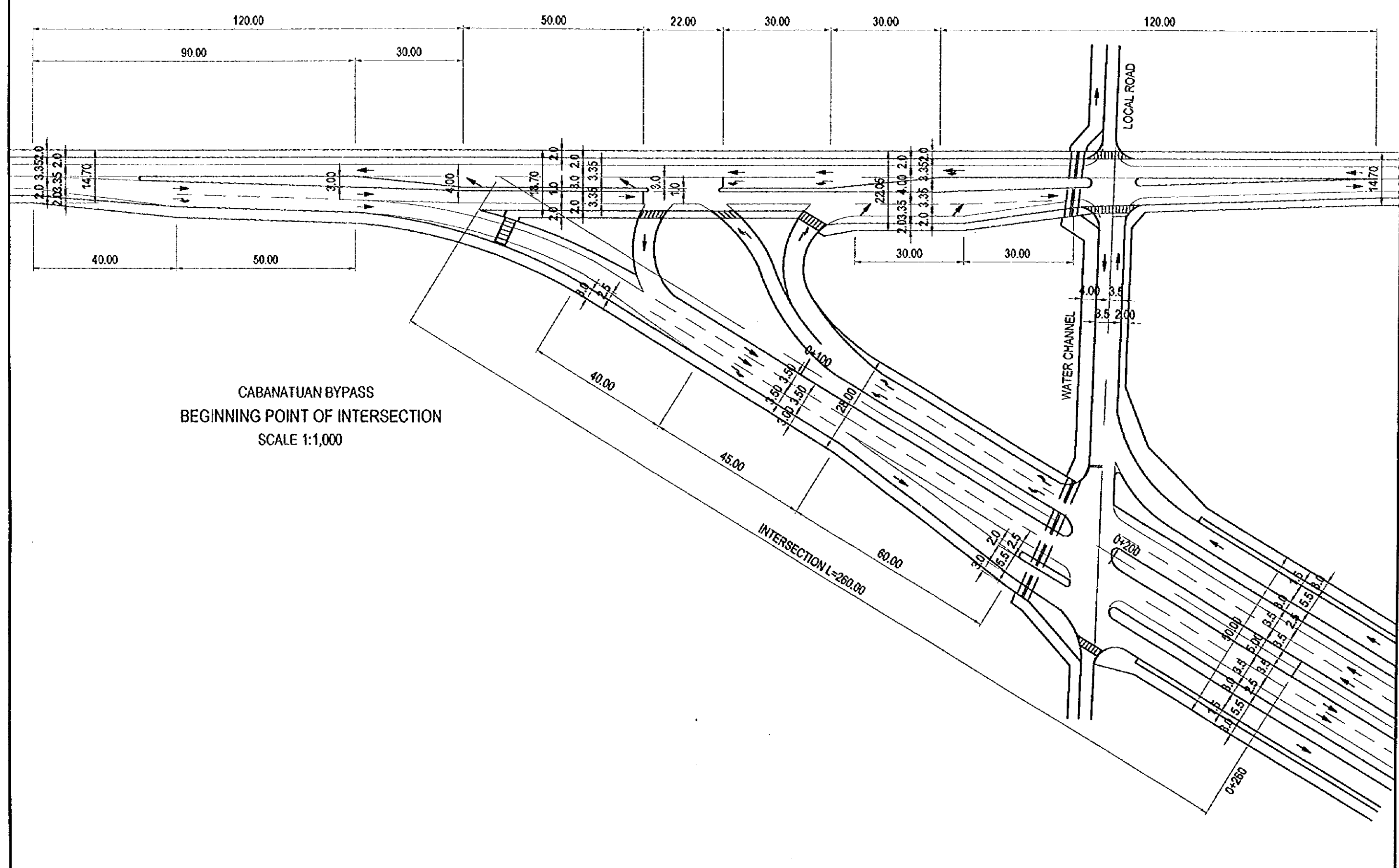
CABANATUAN BYPASS
TYPICAL INTERSECTION (TYPE-2)
SCALE 1:1,000



CABANATUAN BYPASS
TYPICAL INTERSECTION (STAGE CONSTRUCTION)
SCALE 1:1,000

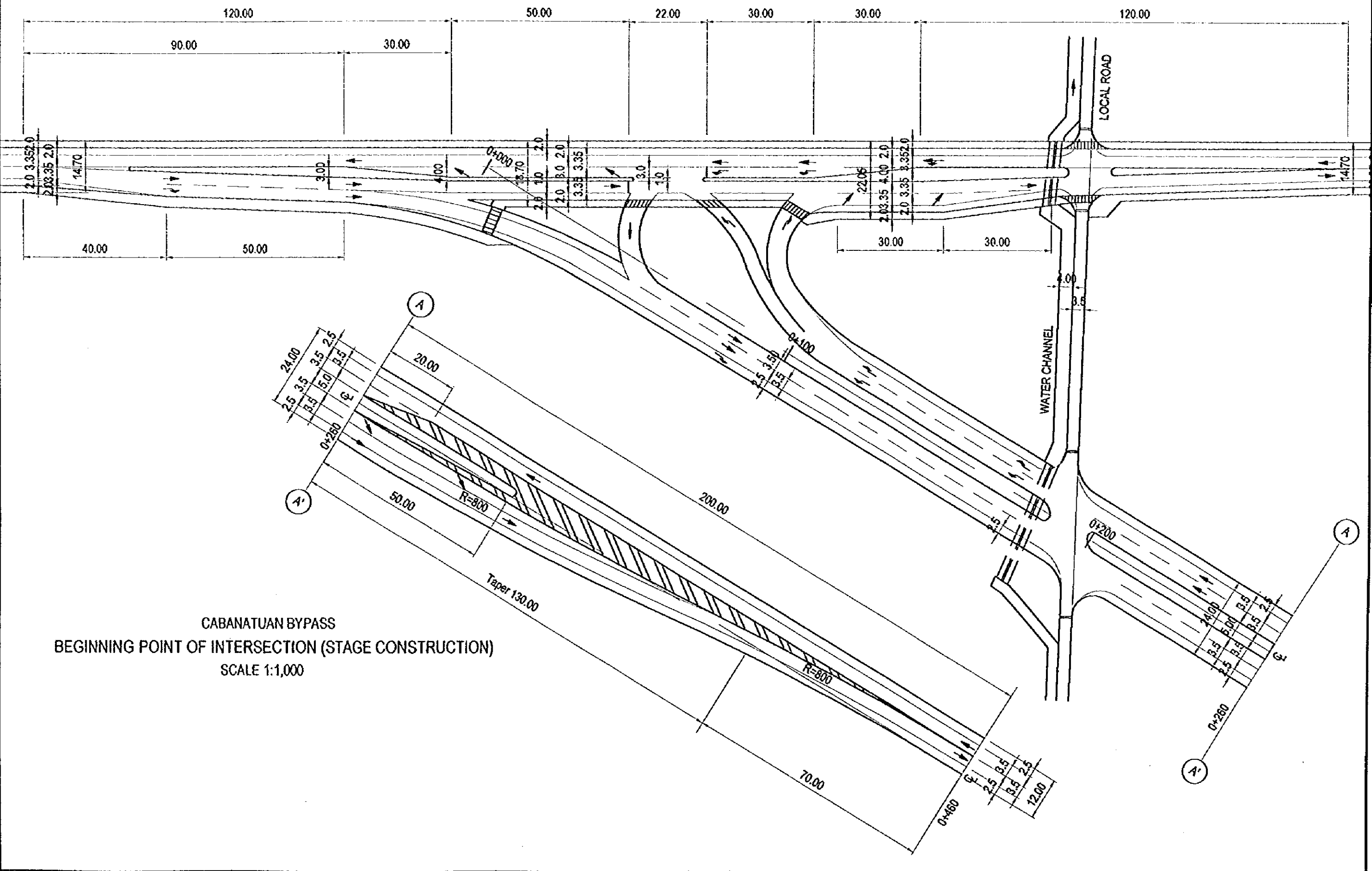


THE FEASIBILITY STUDY ON INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (STA. RITA, PLARIDEL-SAN JOSE SECTION)		
SCALE :	CABANATUAN BYPASS	DRAWING NO.
1:1,000	BEGINNING POINT OF INTERSECTION	47/68

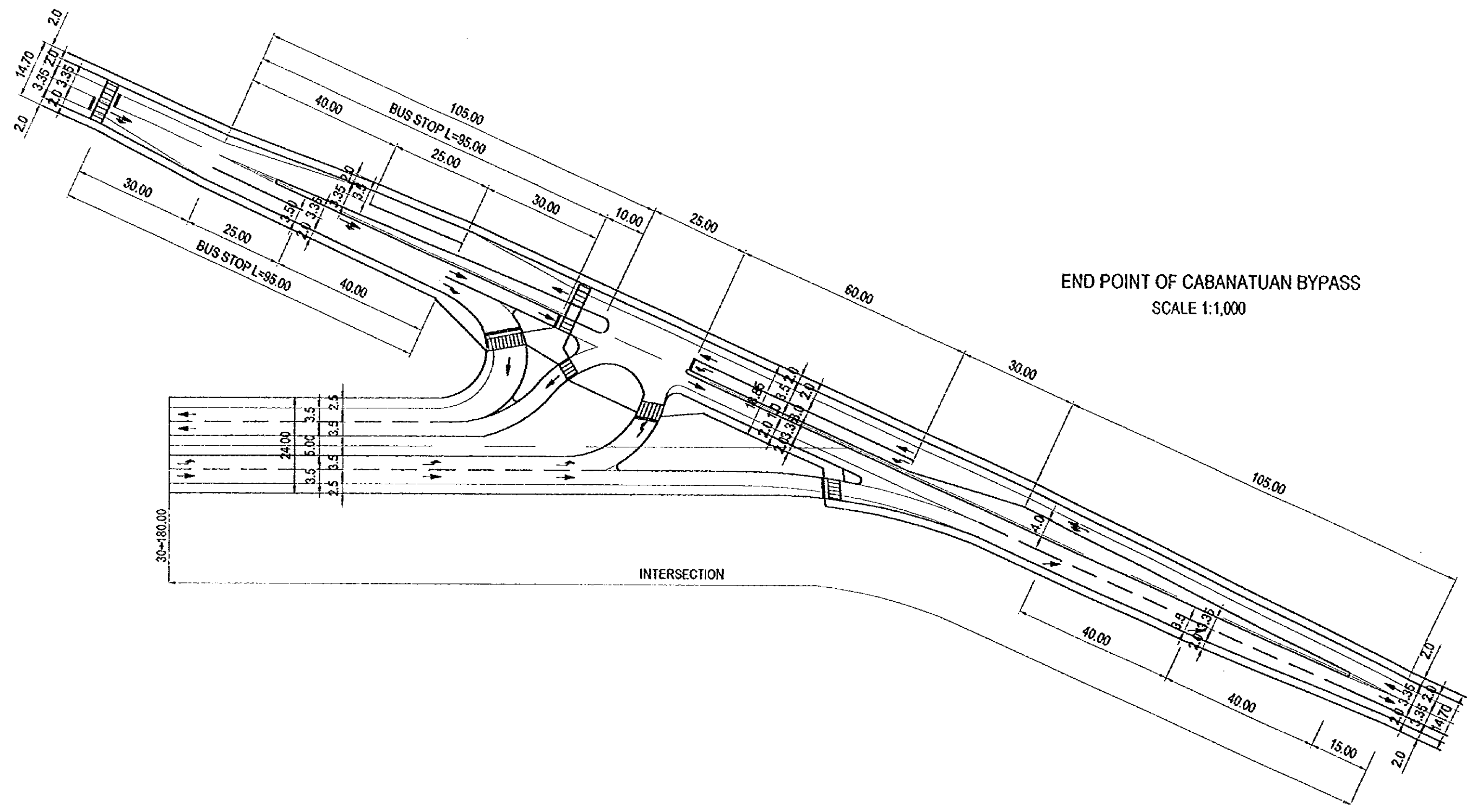


CABANATUAN BYPASS
BEGINNING POINT OF INTERSECTION
SCALE 1:1,000

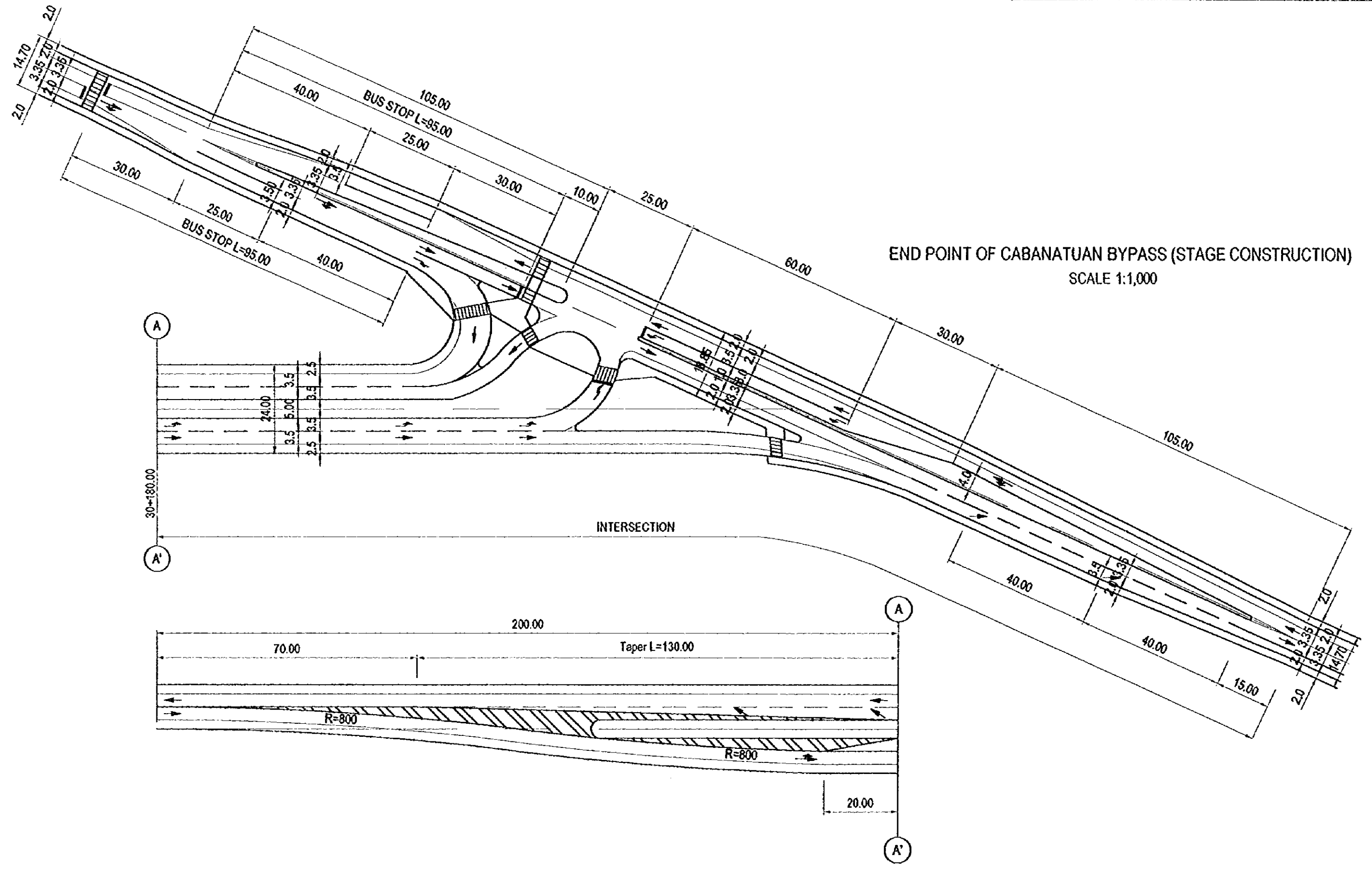
THE FEASIBILITY STUDY ON INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (STA. RITA, PLARIDEL-SAN JOSE SECTION)		
SCALE 1	CABANATUAN BYPASS	DRAWING NO.
1:1,000	BEGINNING POINT OF INTERSECTION (STAGE CONSTRUCTION)	48/68



CABANATUAN BYPASS
BEGINNING POINT OF INTERSECTION (STAGE CONSTRUCTION)
SCALE 1:1,000



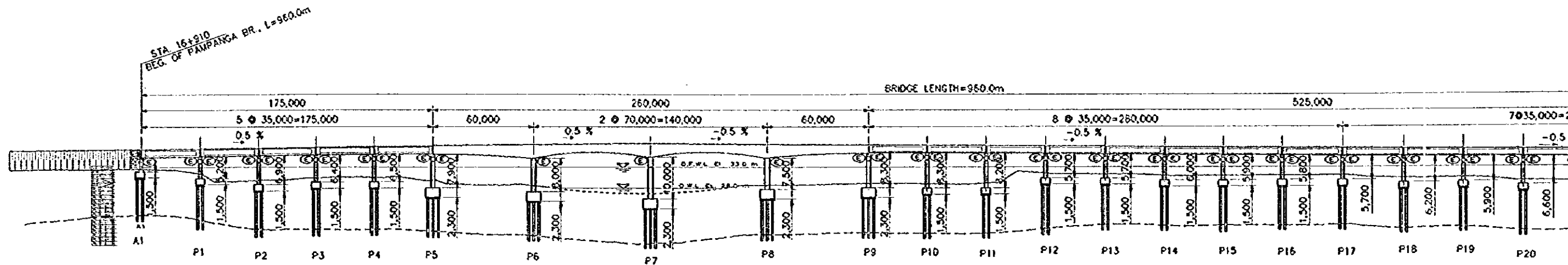
END POINT OF CABANATUAN BYPASS
SCALE 1:1,000



SCALE	STRUCTURAL GE
Ver 1:1000	
Hor 1:2500	

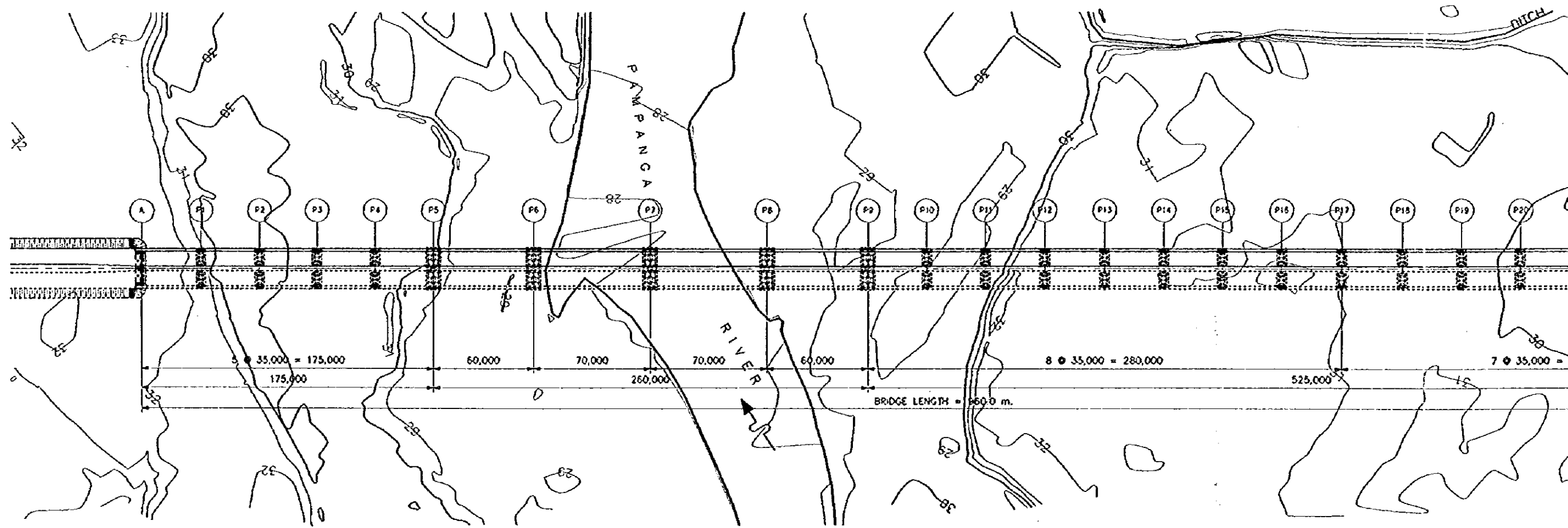
PROFILE

Vertical Scale 1:1000
Horizontal Scale 1:2500



PLAN

Scale 1:2500



A FEASIBILITY STUDY ON UPGRADING OF INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY

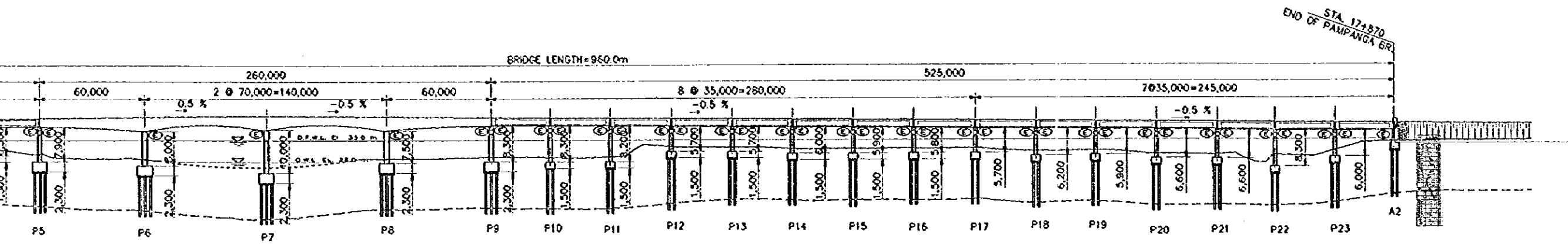
SCALE
Ver 1:1000
Hor 1:2500

STRUCTURAL GENERAL VIEW OF PAMPANGA BR. (1/2)
(CABANATUAN BYPASS)

DRAWING NO.
51/68

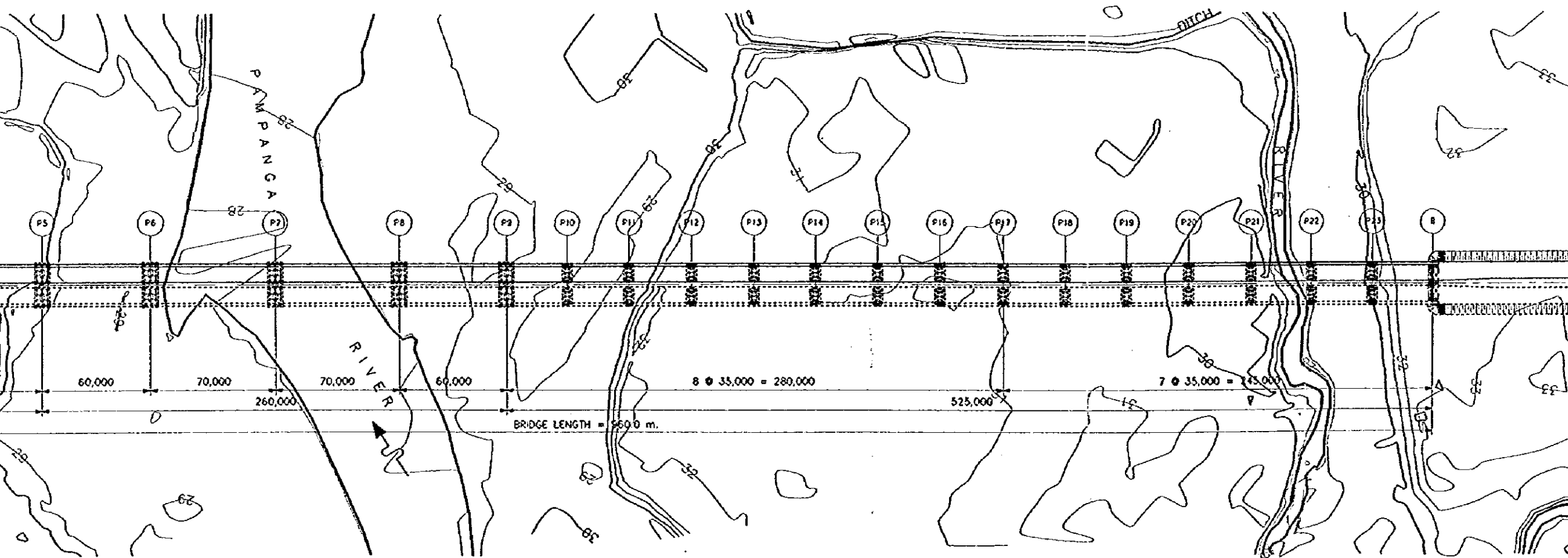
PROFILE

Vertical Scale 1:1000
Horizontal Scale 1:2500



PLAN

Scale 1:2500

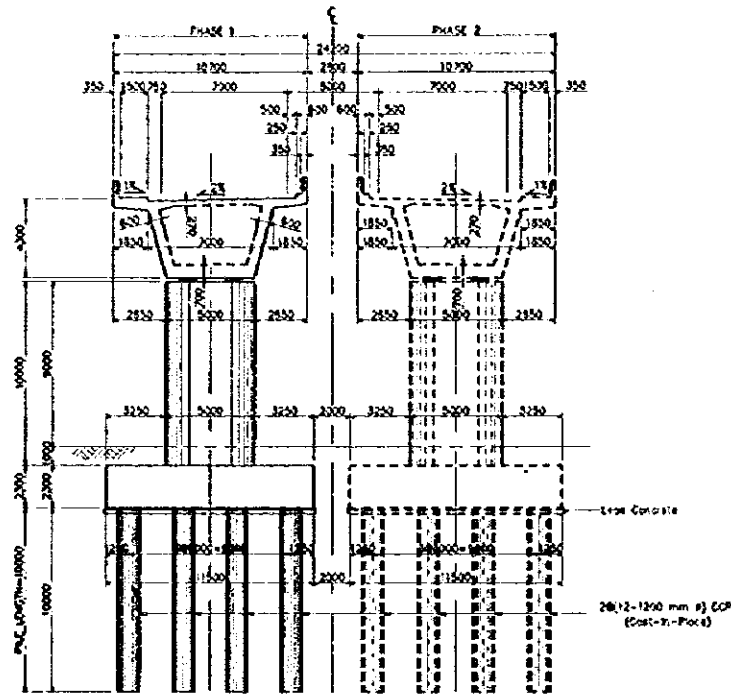


A FEASIBILITY STUDY ON UPGRADING OF INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY

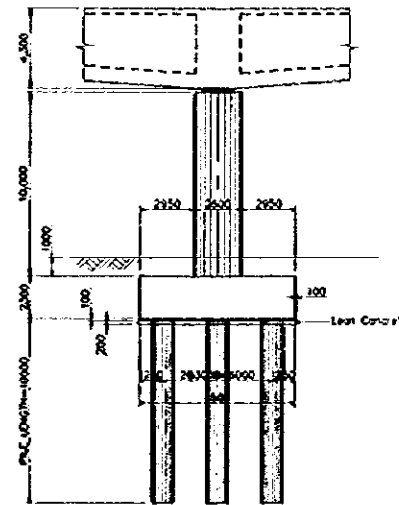
SCALE
1:400
1:40

STRUCTURAL GENERAL VIEW OF PAMPANGA BR. (2/2)
(CABANATUAN BYPASS)

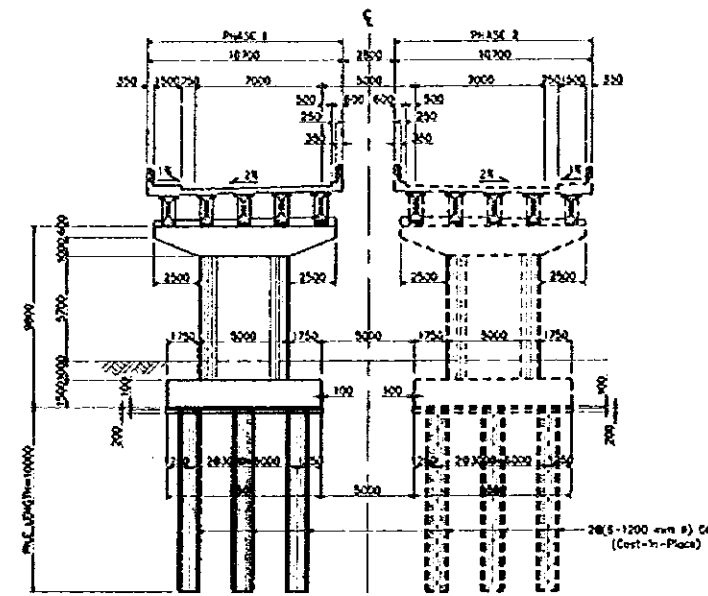
DRAWING NO.
52/68



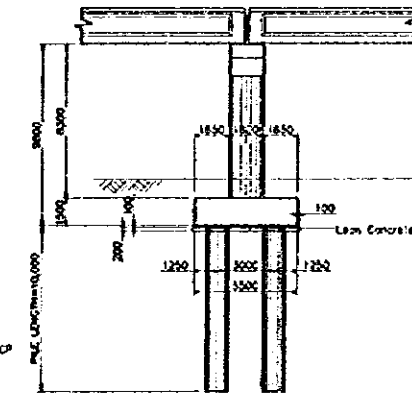
TYPICAL BOX GIRDER SECTION @ SUPPORT
SCALE 1:400



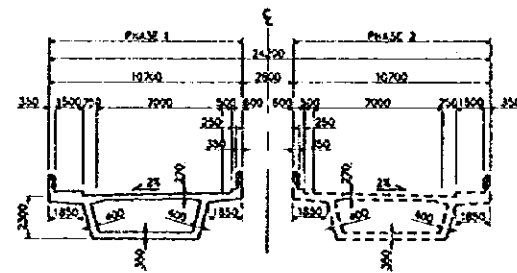
SIDE VIEW
SCALE 1:400



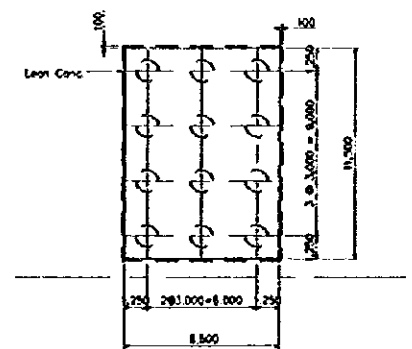
TYPICAL CROSS SECTION OF APPROACH BRIDGE
SCALE 1:400



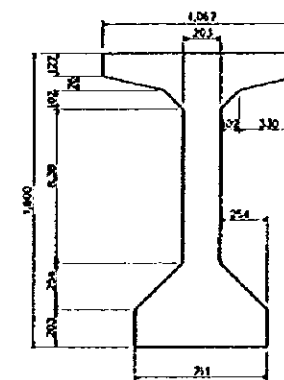
SIDE VIEW
SCALE 1:400



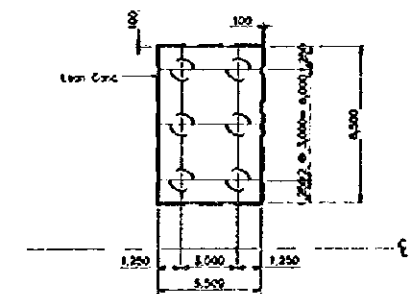
TYPICAL BOX GIRDER SECTION @ CENTER SPAN
SCALE 1:400



FOUNDATION PLAN
SCALE 1:400



AASHTO-TYPE V GIRDER
SCALE 1:40



PILE FOUNDATION PLAN
SCALE 1:400

A FEASIBILITY STUDY ON UPGRADING OF INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY

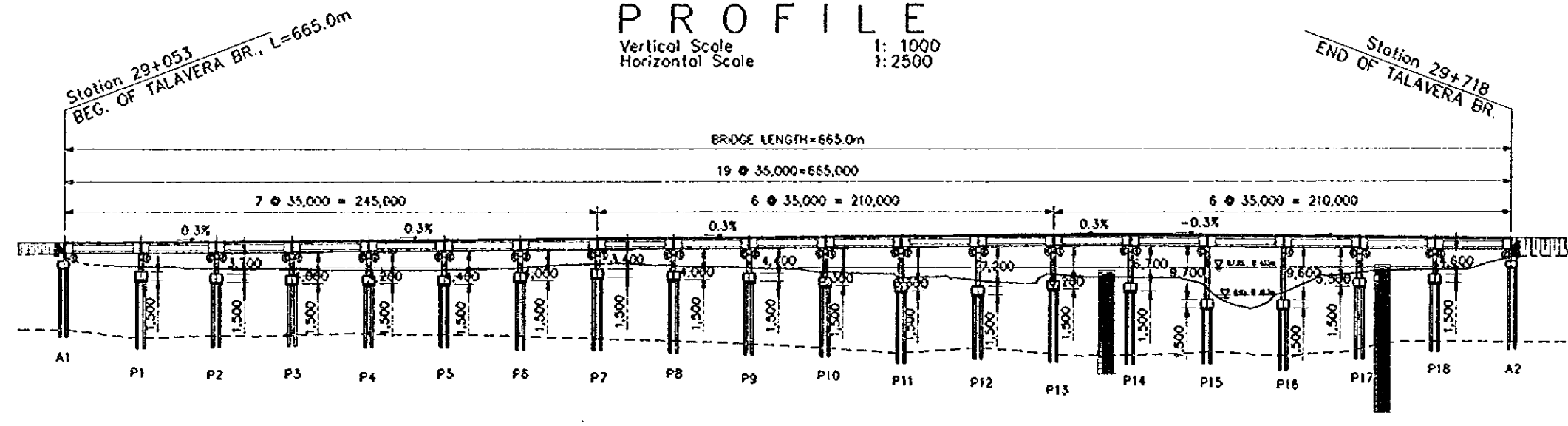
SCALE
Ver 1:1000
Hor 1:2500

STRUCTURAL GENERAL VIEW OF TALAVERA BR. (1/2)
CABANATUAN BYPASS

DRAWING NO.
53/68

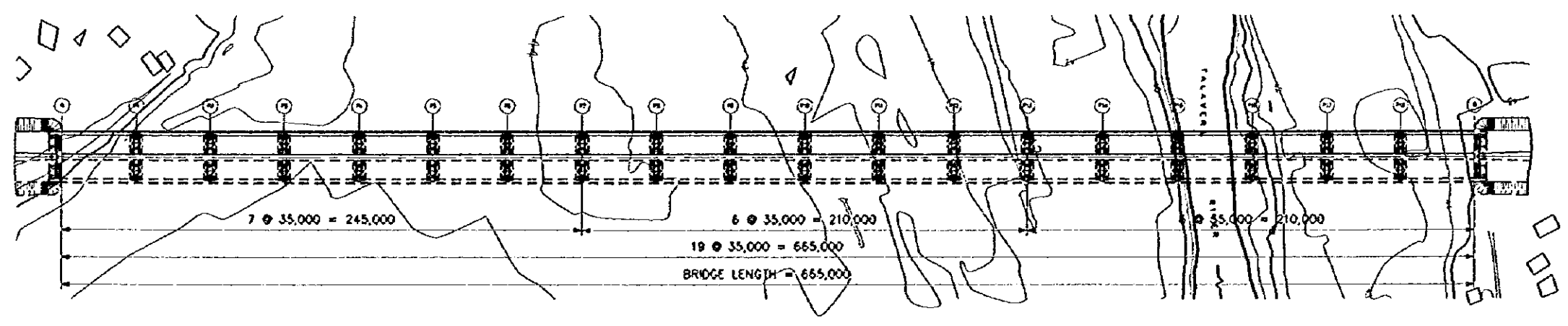
PROFILE

Vertical Scale 1:1000
Horizontal Scale 1:2500



PLAN

Scale 1:2500

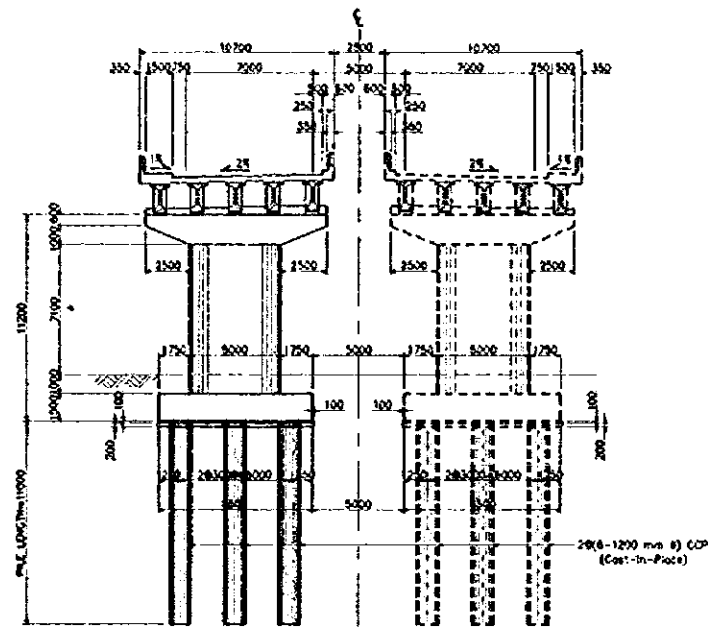


A FEASIBILITY STUDY ON UPGRADING OF INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY

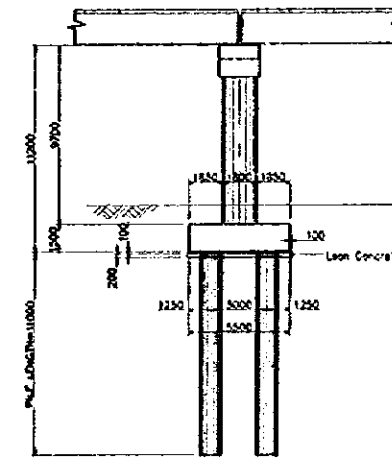
SCALE
1: 400
1: 40

STRUCTURAL GENERAL VIEW OF TALAVERA BR. (2/2)
(CABANATUAN BYPASS)

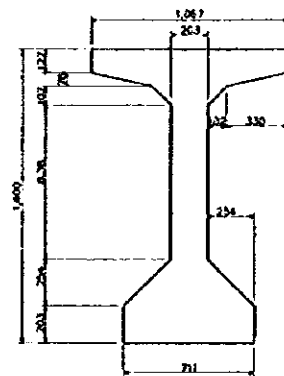
DRAWING NO.
54/68



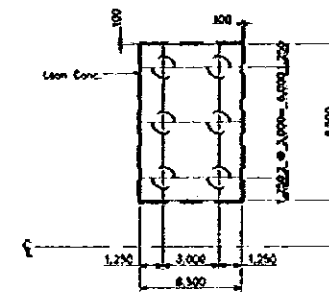
TYPICAL I-GIRDER SECTION @ SUPPORT
Scale 1: 400



SIDE VIEW
Scale 1: 400

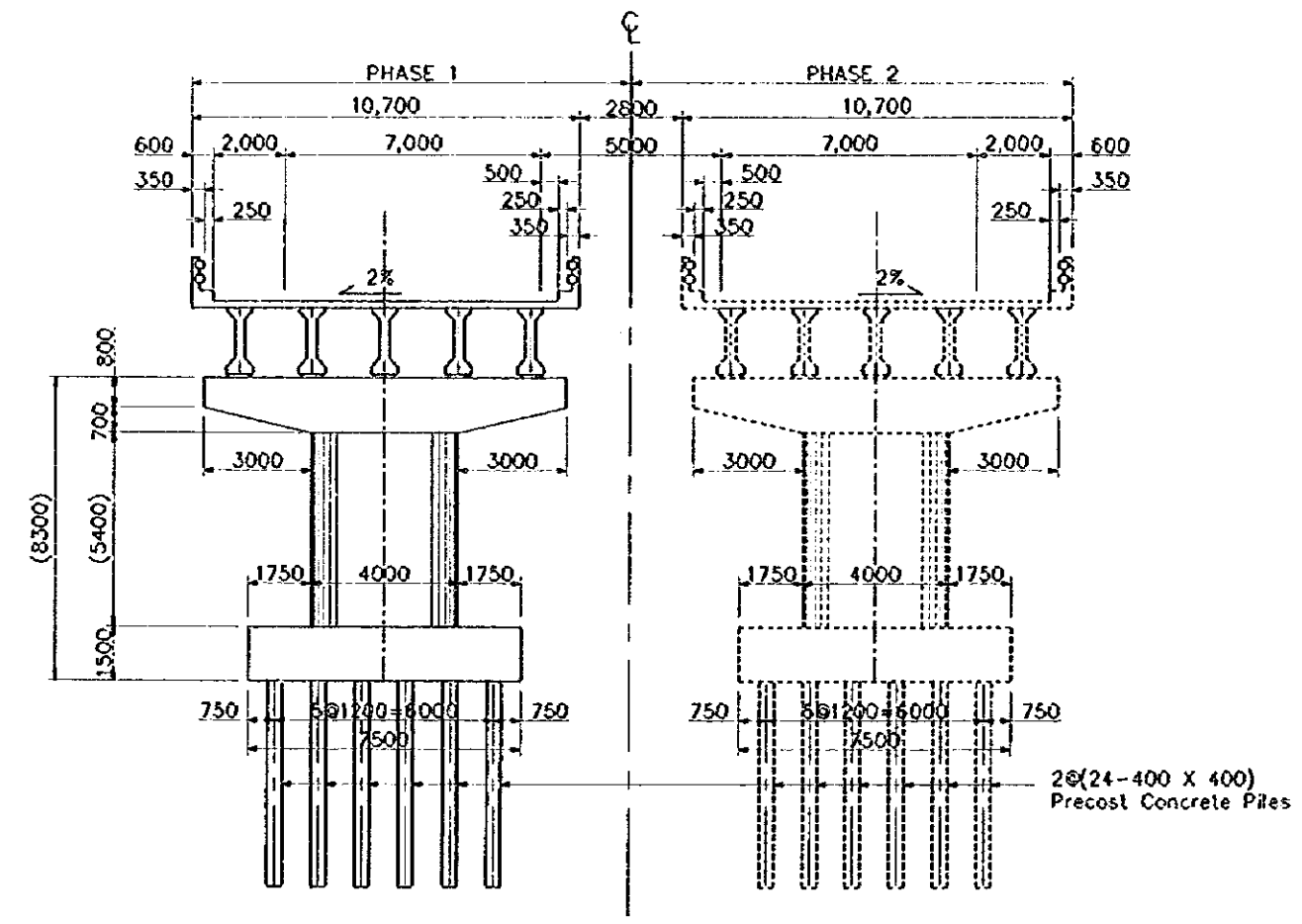


AASHTO-TYPE V GIRDER
Scale 1: 40

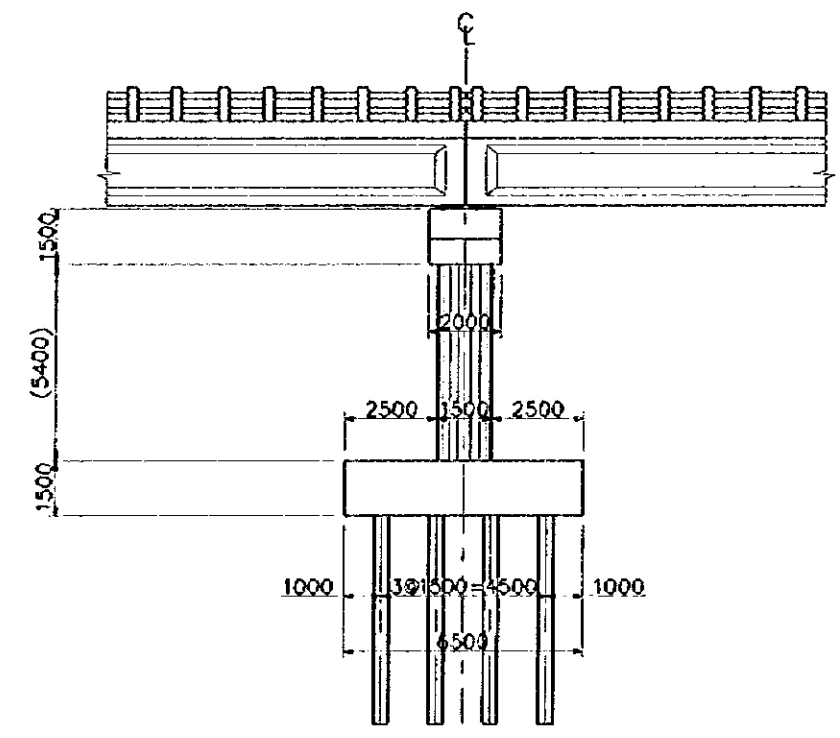


PILE FOUNDATION PLAN
Scale 1: 400

A FEASIBILITY STUDY ON UPGRADING OF INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY		
SCALE	TYPICAL CROSS SECTION OF BRIDGES IN CABANATUAN BYPASS	DRAWING NO.
1:200	1) MAIN ROAD ONLY (WITHOUT FRONTAGE ROAD)	55/68

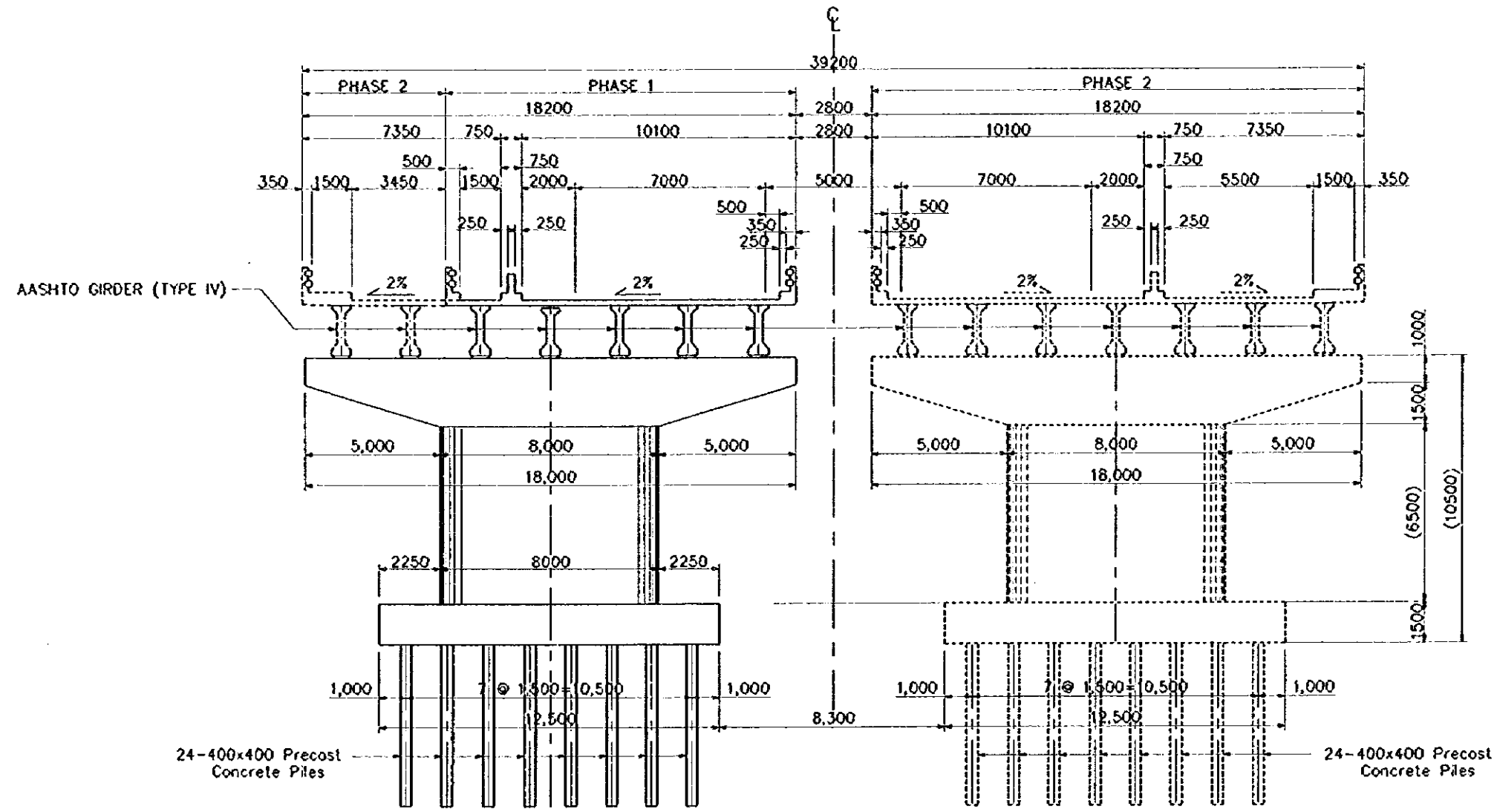


CROSS SECTION @ SUPPORT
SCALE 1:200

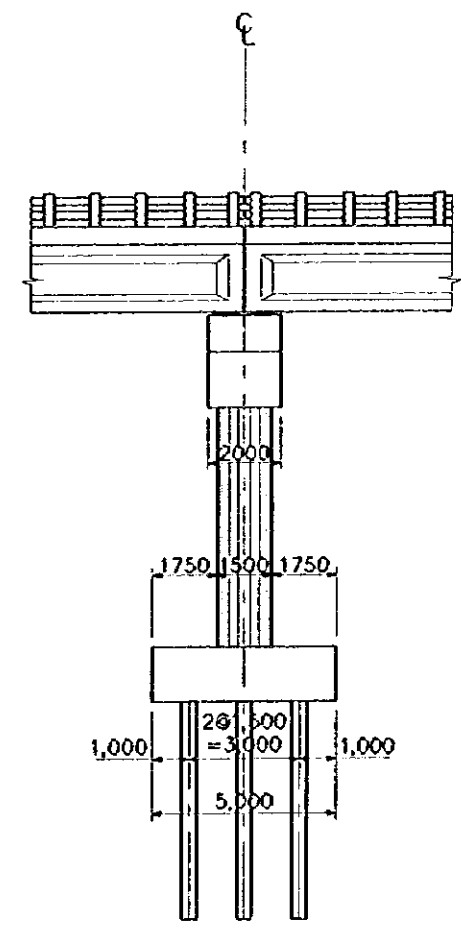


SIDE VIEW
SCALE 1:200

A FEASIBILITY STUDY ON UPGRADING OF INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY		
SCALE	TYPICAL CROSS SECTION OF BRIDGES IN CABANATUAN BYPASS	DRAWING NO.
1:200	2) MAIN ROAD AND FRONTAGE ROAD	56 / 68



CROSS SECTION @ SUPPORT
SCALE 1:200



SIDE VIEW
SCALE 1:200