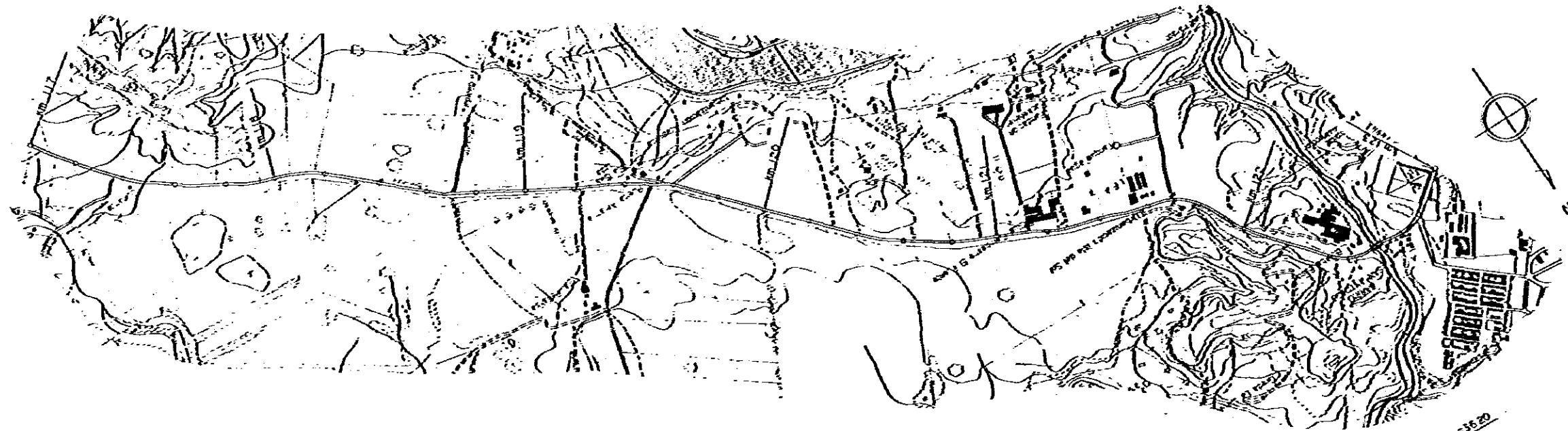
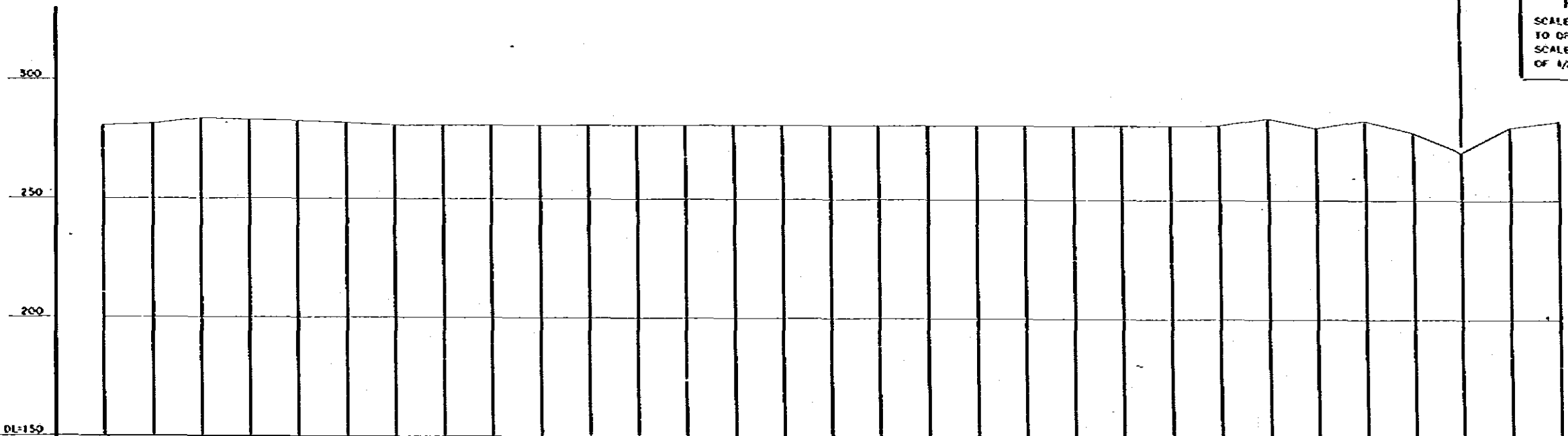


**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY  
 TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE  
 OF 1/2 OF THE ORIGINAL CASE

<b>DATUM LINE</b> CL=200																																
<b>VERTICAL GRADIENT</b>																																
<b>ACCUMULATIVE DISTANCE</b>	KM	113+000	12,000	12,200	12,400	12,600	12,800	13,000	13,200	13,400	13,600	13,800	14,000	14,200	14,400	14,600	14,800	15,000	15,200	15,400	15,600	15,800	16,000	16,200	16,400	16,600	16,800	17,000	17,200	17,400	17,600	17,800
<b>IN - SITU KM POST</b>	KM	113	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000	5200	5400	5600	5800	6000
<b>HORIZONTAL CURVE</b>																																
<b>M O P T</b>	BOGOTA — BUENAVENTURA ROAD PROJECT										UNIMPROVED SECTION (Melgar-Espinal) KM 113+000 — KM 117+000							SCALE	PLAN 1:10000 PROFILE H=1:10000 V=1:1000	DATE MARCH 1982	SHEET No. 92 OF 135											



**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY  
 TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE  
 OF 1/2 OF THE ORIGINAL ONE



DATUM LINE DL=150

VERTICAL GRADIENT

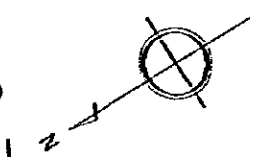
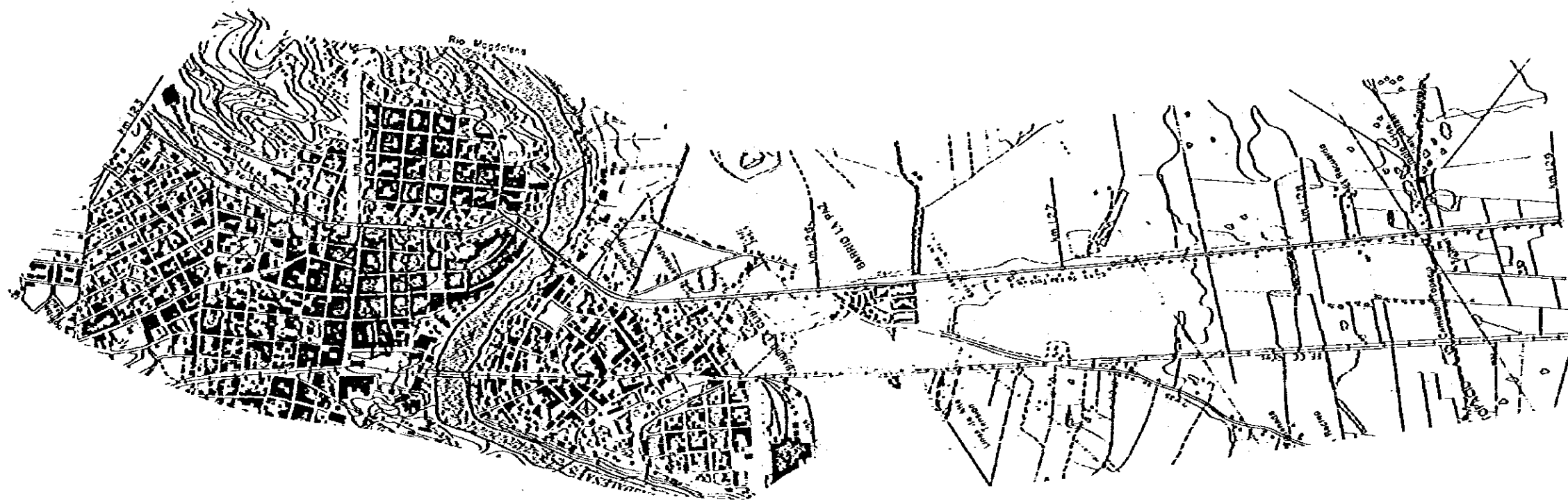
ACCUMULATIVE DISTANCE

IN - SITU KM POST

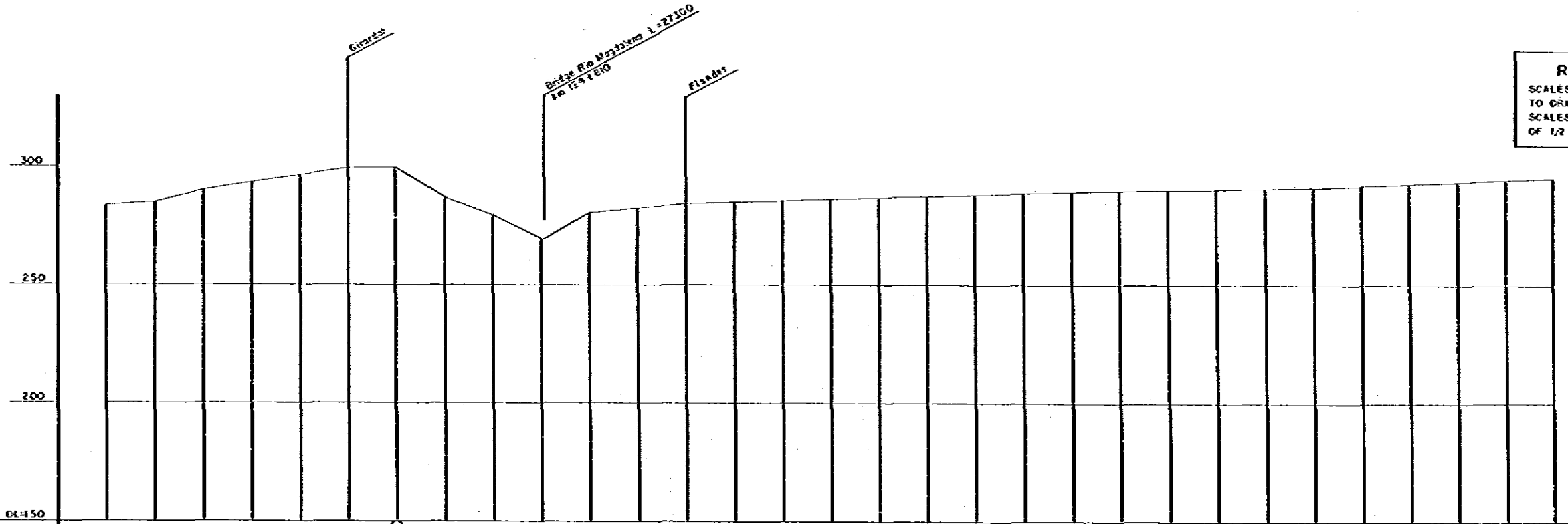
HORIZONTAL CURVE

17.800	18.000	18.200	18.400	18.600	18.800	19.000	19.200	19.400	19.600	19.800	20.000	20.200	20.400	20.600	20.800	21.000	21.200	21.400	21.600	21.800	22.000	22.200	22.400	22.600	22.800	23.000	23.200	23.400	23.600	23.800
117	200	400	600	800	118	2000	400	600	800	119	200	400	600	800	120	200	400	600	800	121	200	400	600	800	122	200	400	600	800	123

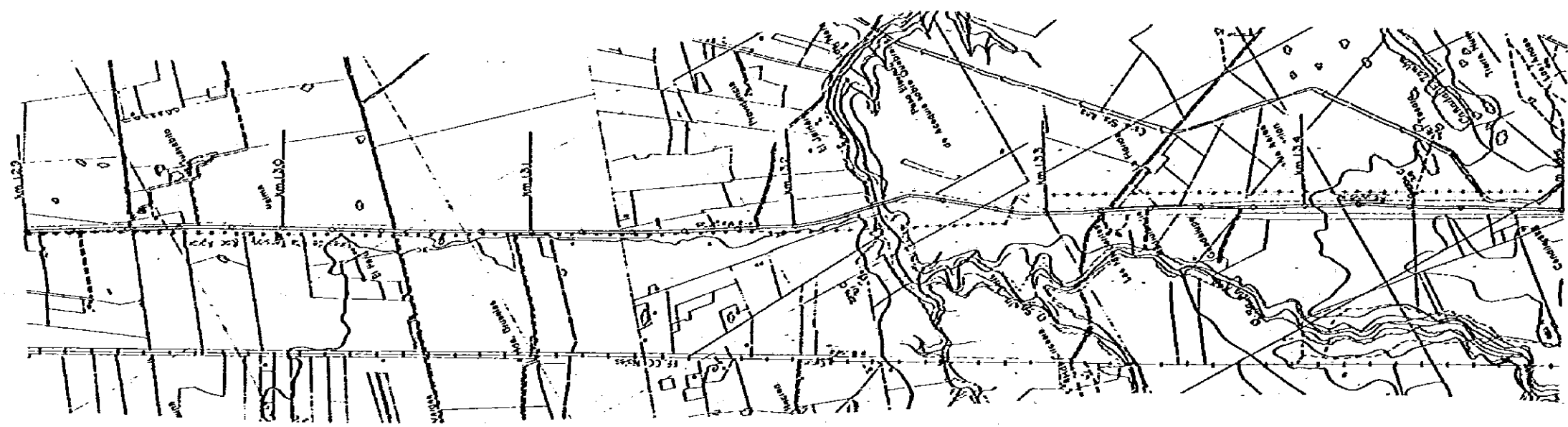
M O P T	BOGOTA — BUENAVENTURA ROAD PROJECT	UNIMPROVED SECTION (Melgor-Espinal) KM 117+000 — KM 123+000	SCALE	PLAN 1:10000	DATE MARCH 1982
				PROFILE H=1:10000 V=1:1000	SHEET No. 93 OF 135



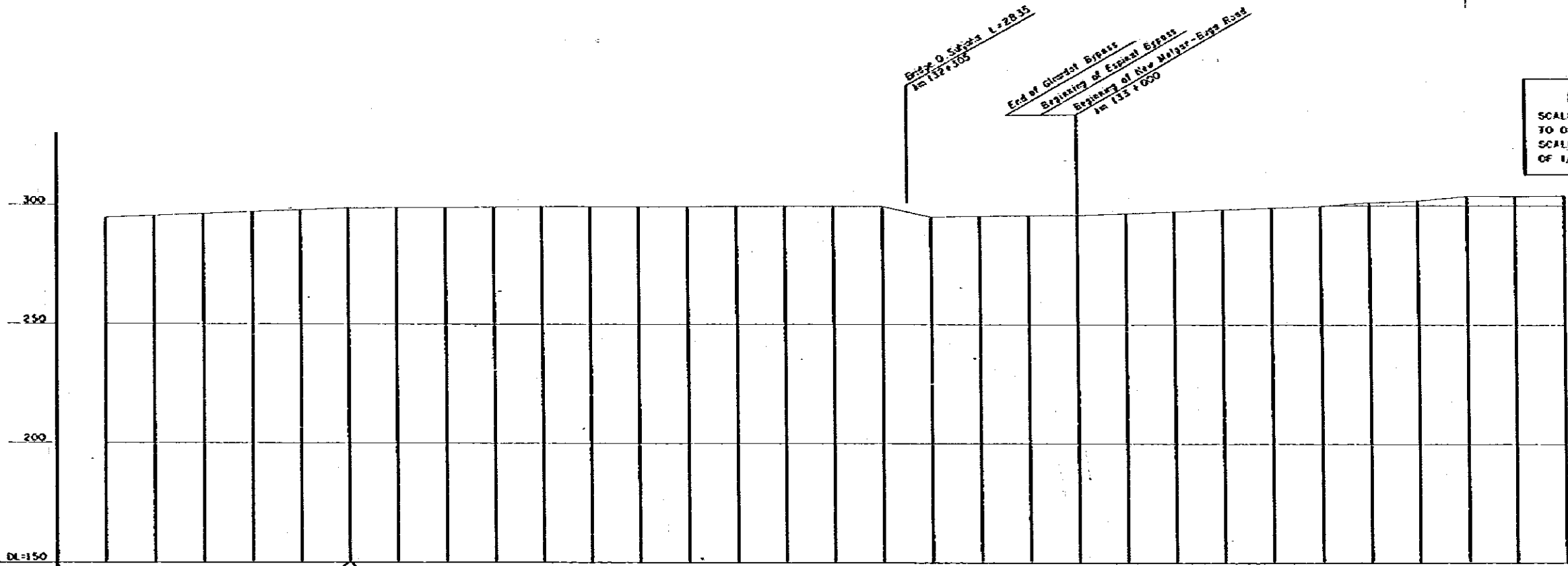
**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY  
 TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE  
 OF 1/2 OF THE ORIGINAL ONE



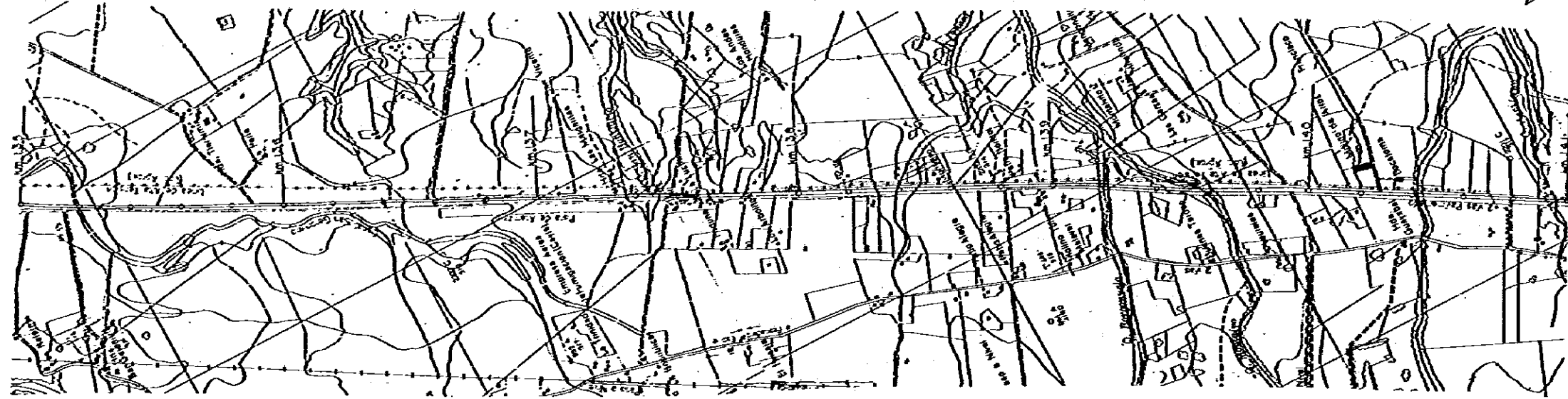
<b>DATUM LINE</b> 04-150																															
<b>VERTICAL GRADIENT</b>																															
<b>ACCUMULATIVE DISTANCE</b>	KM 23+000	24+000	24+200	24+400	24+600	25+000	25+200	25+400	25+600	25+800	26+000	26+200	26+400	26+600	26+800	27+000	27+200	27+400	27+600	28+000	28+200	28+400	28+600	28+800	29+000	29+200	29+400	29+600	29+800		
<b>IN - SITU KM POST</b>	123	200	400	600	800	124	200	400	600	800	125	200	400	600	800	126	200	400	600	800	127	200	400	600	800	128	200	400	600	800	129
<b>HORIZONTAL CURVE</b>																															
<b>M O P T</b>	<b>BOGOTA — BUENAVENTURA ROAD PROJECT</b>								<b>UNIMPROVED SECTION (Melgar-Espinal)</b> KM 123+000 — KM 129+000								<b>SCALE</b> PLAN 1:10000 PROFILE H=1:10000 V=1:1000		<b>DATE</b> MARCH 1982												
																					SHEET No. 94 OF 135										



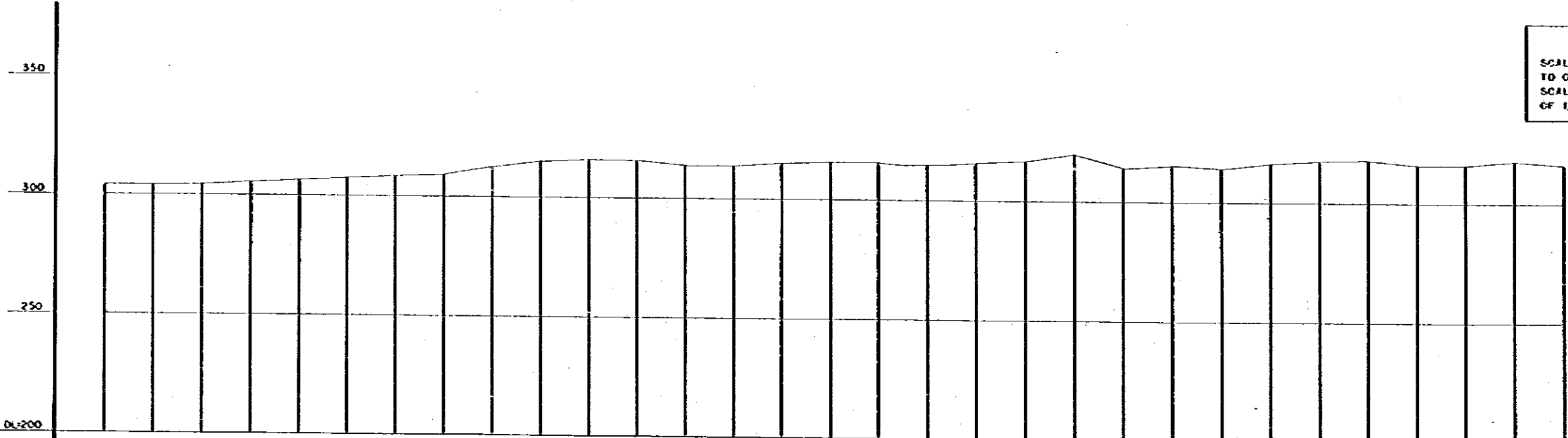
**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY  
 TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE  
 OF 1/2 OF THE ORIGINAL ONE



DATUM LINE	DL=150																				
VERTICAL GRADIENT	$\frac{1.0000}{1.2000}$ $\frac{1.0000}{1.2000}$ $\frac{1.0000}{1.2000}$ $\frac{1.0000}{1.2000}$																				
ACCUMULATIVE DISTANCE	KM 129	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000
IN - SITU KM POST	129	150	170	190	210	230	250	270	290	310	330	350	370	390	410	430	450	470	490	510	530
HORIZONTAL CURVE																					
<b>M O P T</b>	BOGOTA — BUENAVENTURA ROAD PROJECT					UNIMPROVED SECTION (Melgor-Espinal) KM 129+000 — KM 135+000										SCALE	PLAN 1:10000 PROFILE H=1:10000 V=1:1000	DATE MARCH 1982	SHEET No. 95 OF 135		



**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE



DATUM LINE 200

VERTICAL GRADIENT

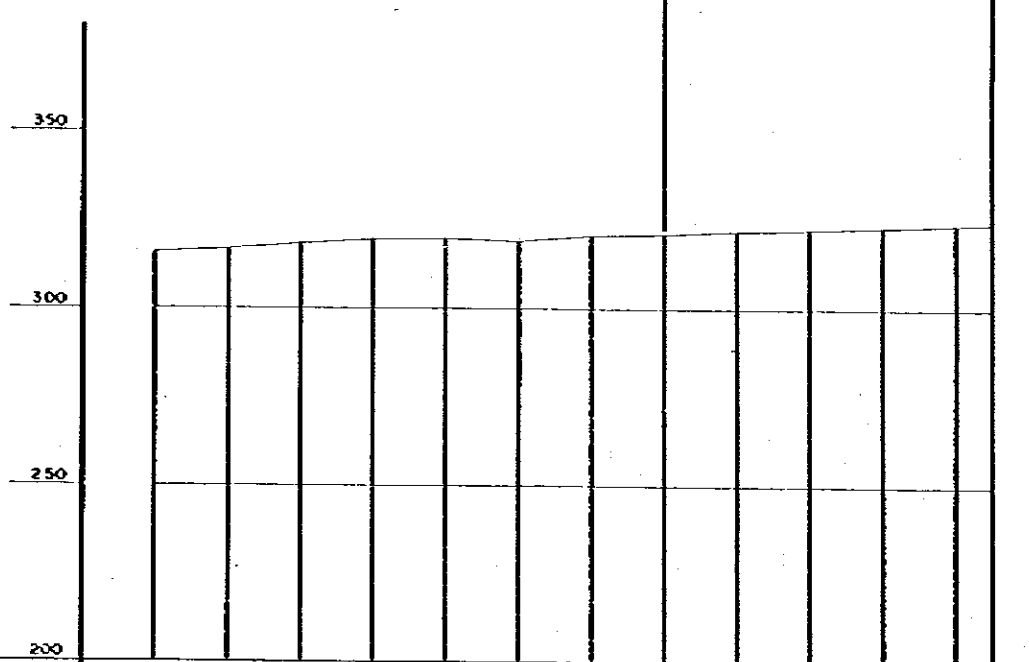
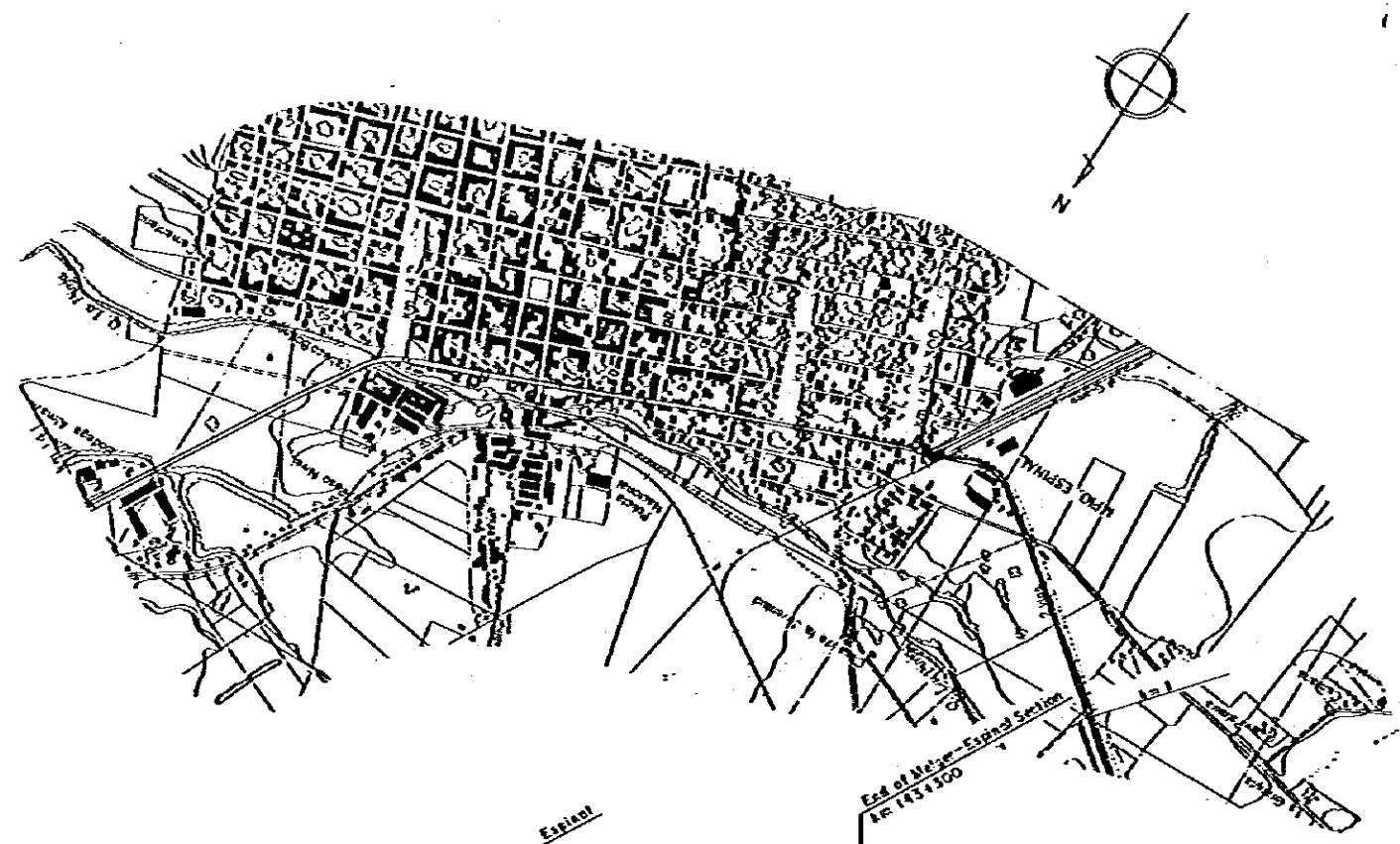
ACCUMULATIVE DISTANCE

IN - SITU KM POST

HORIZONTAL CURVE

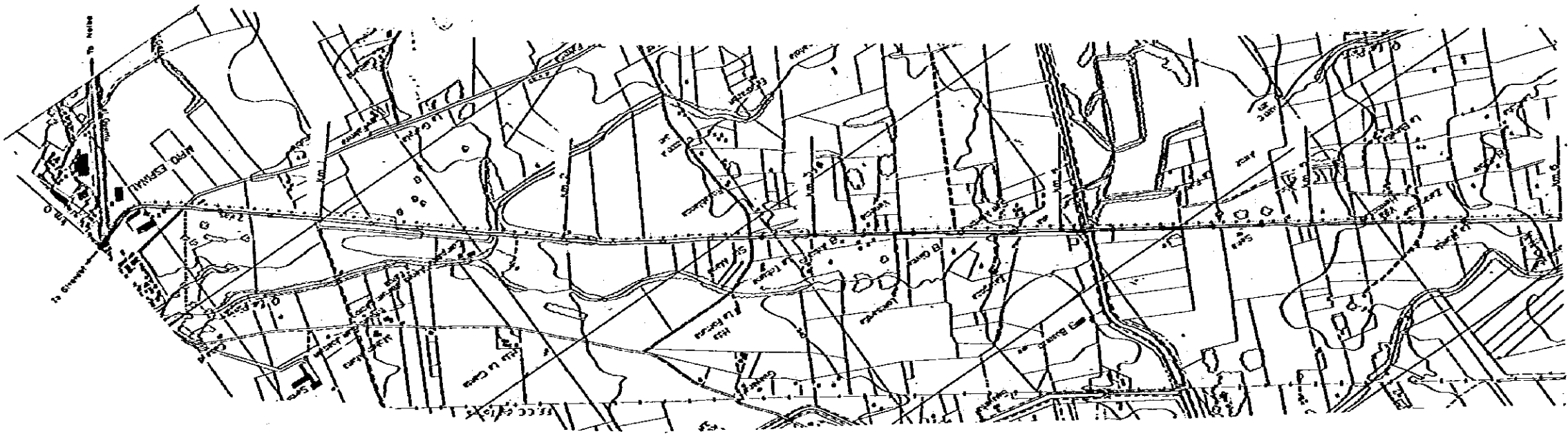
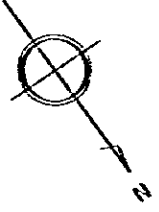
M O P T

ACCUMULATIVE DISTANCE	KM 33.000	36.000	36.200	36.400	36.600	36.800	37.000	37.200	37.400	37.600	37.800	38.000	38.200	38.400	38.600	38.800	39.000	39.200	39.400	39.600	39.800	40.000	40.200	40.400	40.600	40.800	41.000	41.200	41.400	41.600	41.800
IN - SITU KM POST	135	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000	5200	5400	5600	5800	
HORIZONTAL CURVE																															
BOGOTA - BUENAVENTURA ROAD PROJECT		UNIMPROVED SECTION (Melgor-Espinal) KM 135+000 - KM 141+000															SCALE	PLAN 1:10000 PROFLE H:1:10000 V:1:1000	DATE MARCH 1982 SHEET No. 96 OF 135												



**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

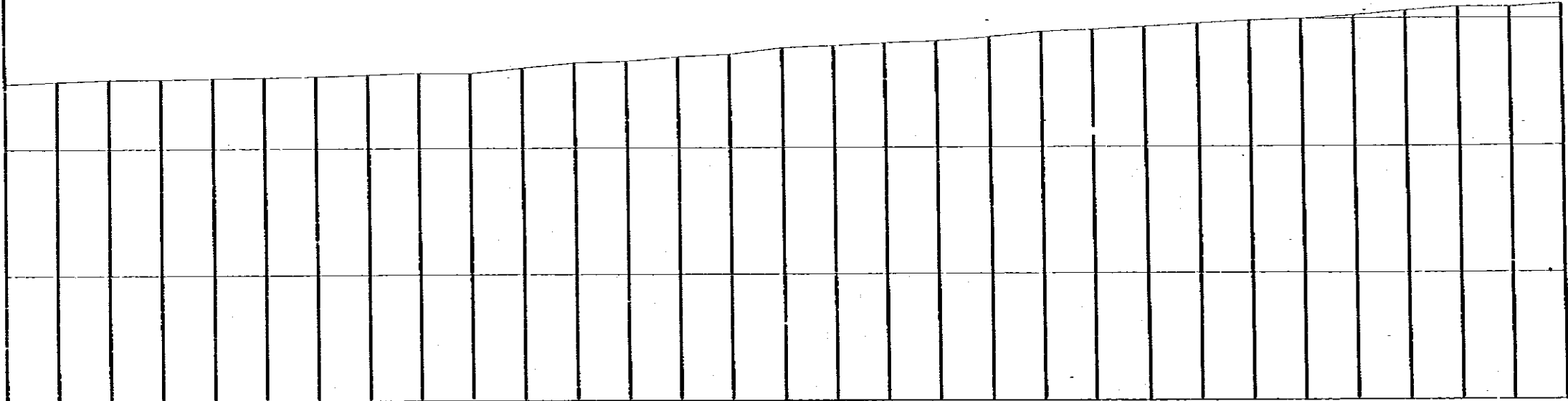
DATUM LINE	200											
VERTICAL GRADIENT												
ACCUMULATIVE DISTANCE	KM	200	400	600	800	1000	1200	1400	1600	1800	2000	2200
IN - SITU KM POST	KM	141	142	143	144	145	146	147	148	149	150	151
HORIZONTAL CURVE												
M O P T	BOGOTA - BUENAVENTURA ROAD PROJECT						UNIMPROVED SECTION (Melgor-Espinal)					
							KM 141+000 - KM 143+300					
SCALE	PLAN	1:10000										
	PROFILE	H=1:10000 V=1:1000										
DATE	MARCH 1982											
SHEET No.	97 OF 135											



**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL CASE

Espinal - Ibagué Section  
 IN 0+000

350  
 300  
 250

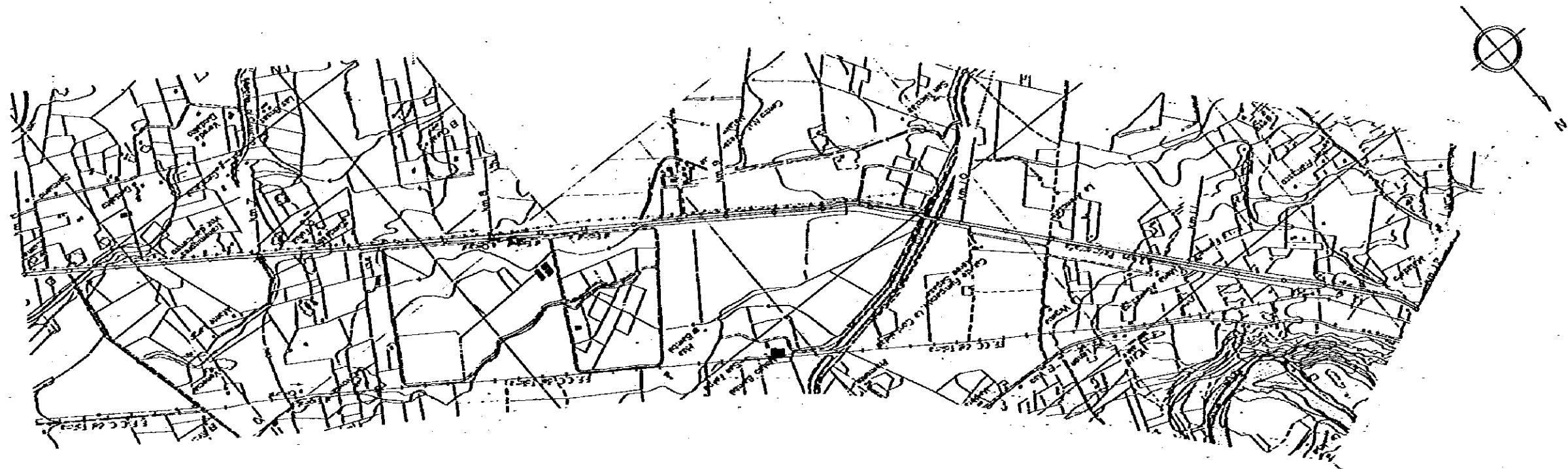


DATUM LINE DL-200

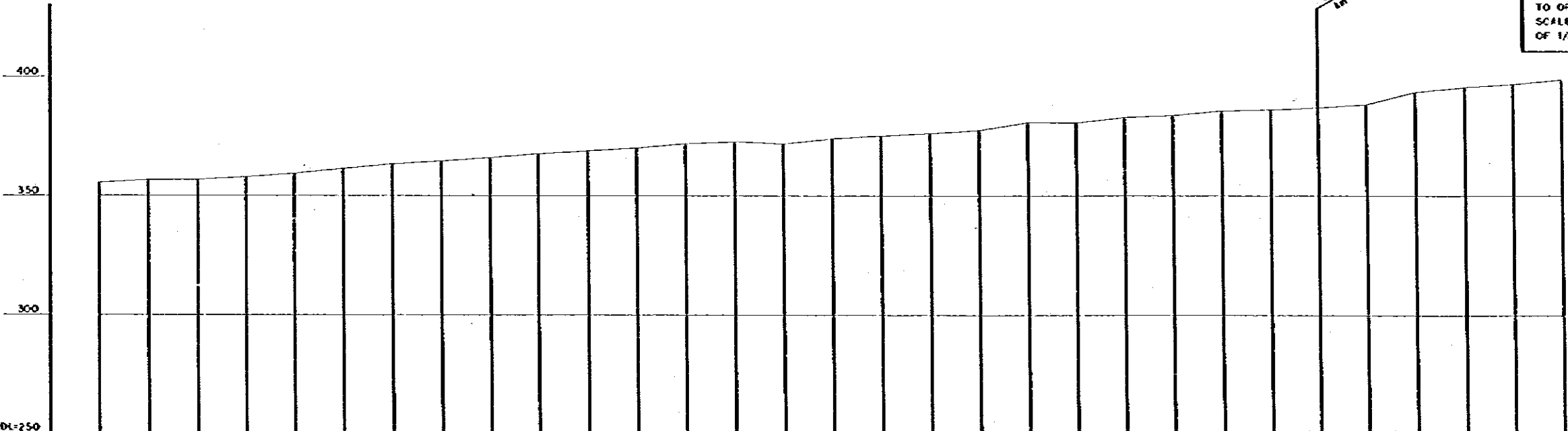
VERTICAL GRADIENT  
 ACCUMULATIVE DISTANCE  
 IN - SITU KM POST  
 HORIZONTAL CURVE

VERTICAL GRADIENT																															
ACCUMULATIVE DISTANCE	KM 0	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000	5200	5400	5600	5800	6000
IN - SITU KM POST	0	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000	5200	5400	5600	5800	6000
HORIZONTAL CURVE																															

M O P T	BOGOTA — BUENAVENTURA ROAD PROJECT	UNIMPROVED SECTION (Espinal-Ibagué) KM 0+000 - KM 6+000	SCALE	PLAN	1:10000	DATE	MARCH 1982
				PROFILE	H=1:10000 V=1:1000		



**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY  
 TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE  
 OF 1/2 OF THE ORIGINAL ONE



DATUM LINE DL-250

VERTICAL GRADIENT  
 ACCUMULATIVE DISTANCE  
 IN - SITU KM POST  
 HORIZONTAL CURVE

ACCUMULATIVE DISTANCE	KM	6+000	800	1600	2400	3200	4000	4800	5600	6400	7200	8000	8800	9600	10400	11200	12000
IN - SITU KM POST	KM	6	6+200	6+400	6+600	6+800	7	7+200	7+400	7+600	7+800	8	8+200	8+400	8+600	8+800	9
VERTICAL GRADIENT	1:10000																

M O P T

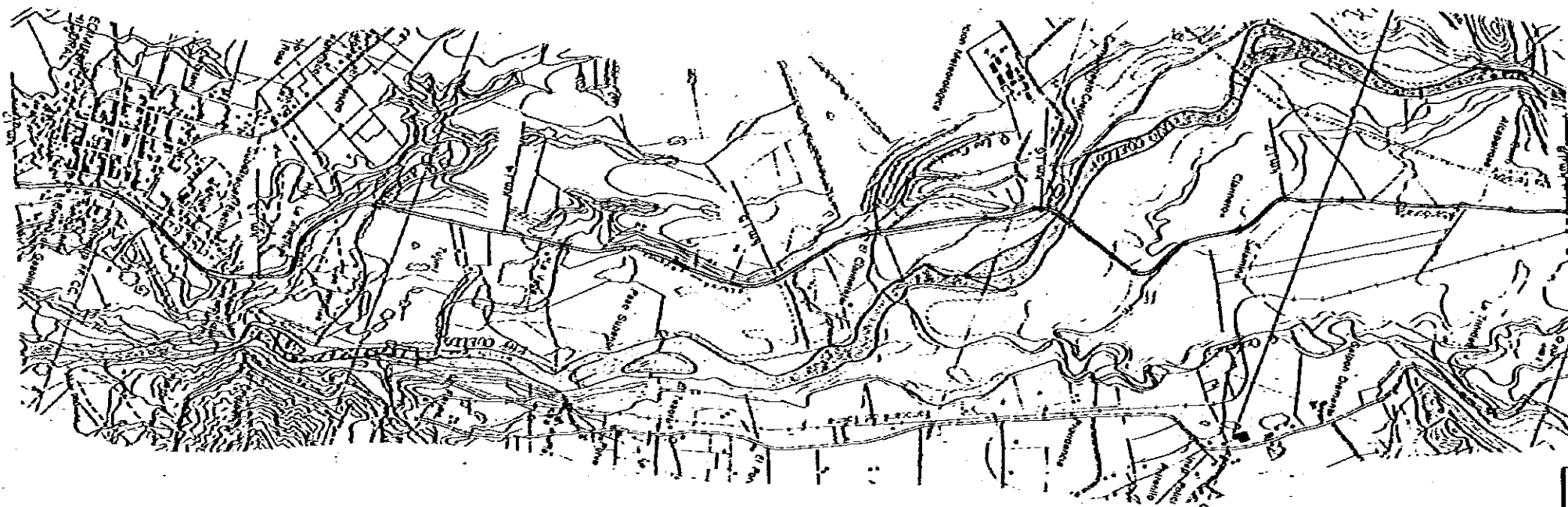
BOGOTA -- BUENAVENTURA  
 ROAD PROJECT

UNIMPROVED SECTION (Espinol-Ibogué)  
 KM 6+000 - KM 12+000

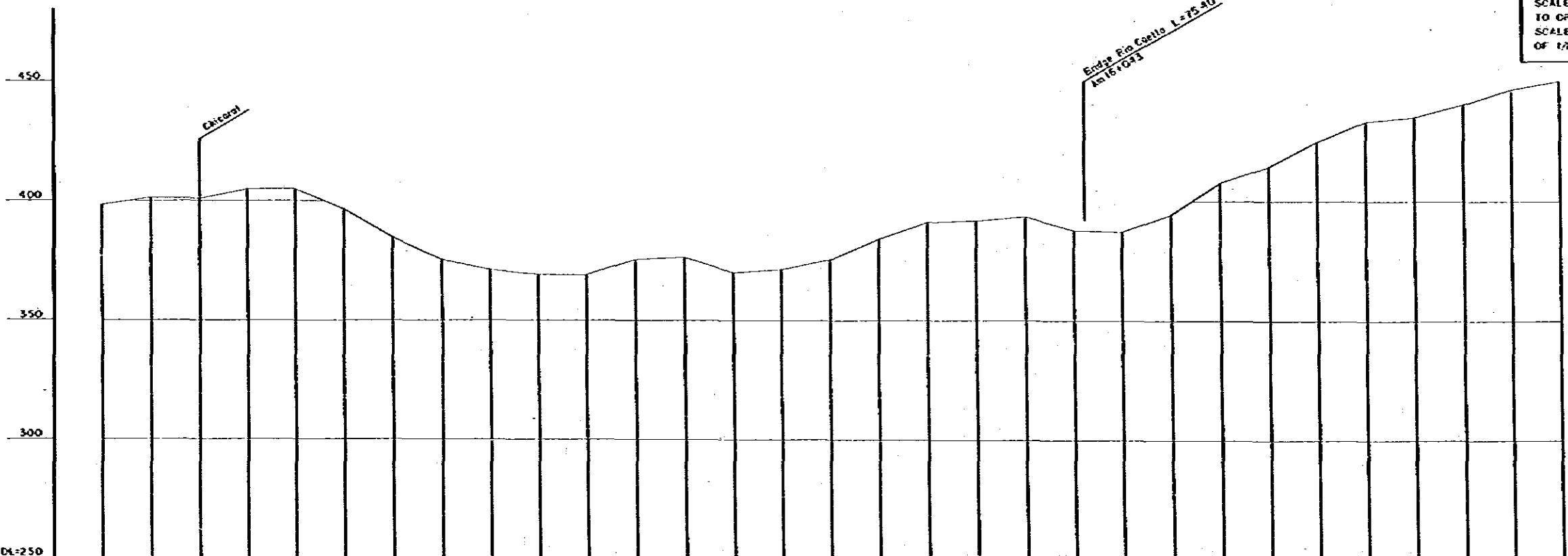
SCALE PLAN 1:10000  
 PROFILE H=1:10000  
 V=1:1000

DATE MARCH 1982  
 SHEET No. 99 OF 135





**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY  
 TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE  
 OF 1/2 OF THE ORIGINAL ONE



DATUM LINE DL=250

VERTICAL GRADIENT

ACCUMULATIVE DISTANCE

IN - SITU KM POST

HORIZONTAL CURVE

		$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00	$1:10000$ L=171.00
KM	12	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4200	4400	4600
POST		36.100	36.300	36.500	36.700	36.900	37.100	37.300	37.500	37.700	37.900	38.100	38.300	38.500	38.700	38.900	39.100	39.300	39.500	39.700	39.900	40.100	40.300	40.500

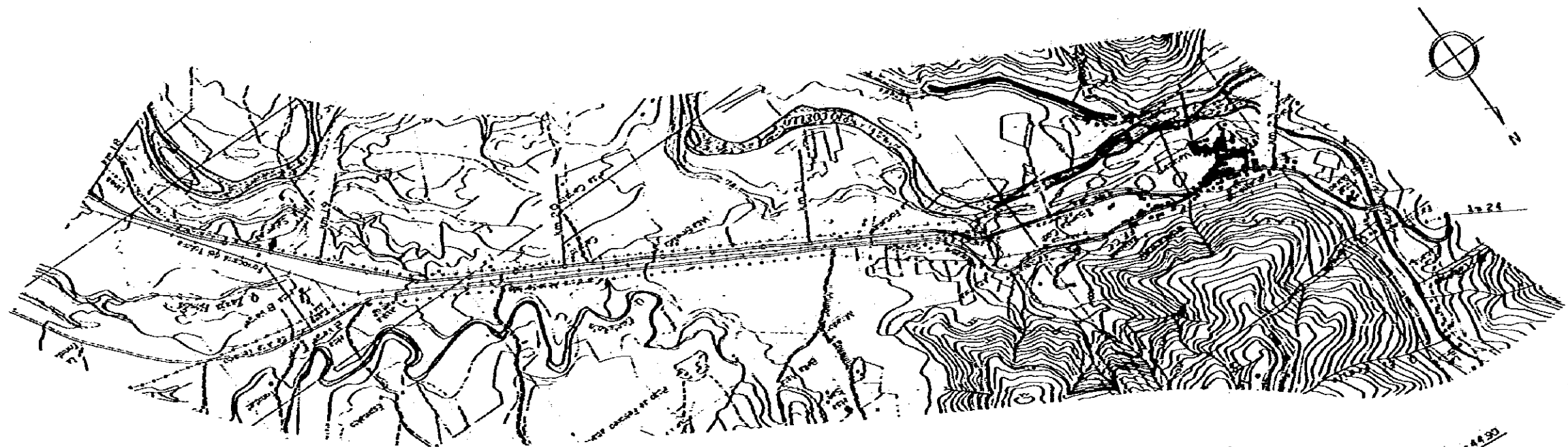
M O P T

BOGOTÁ - BUENAVENTURA ROAD PROJECT

UNIMPROVED SECTION (Espinal - Ibagué)  
 KM 12+000 - KM 18+000

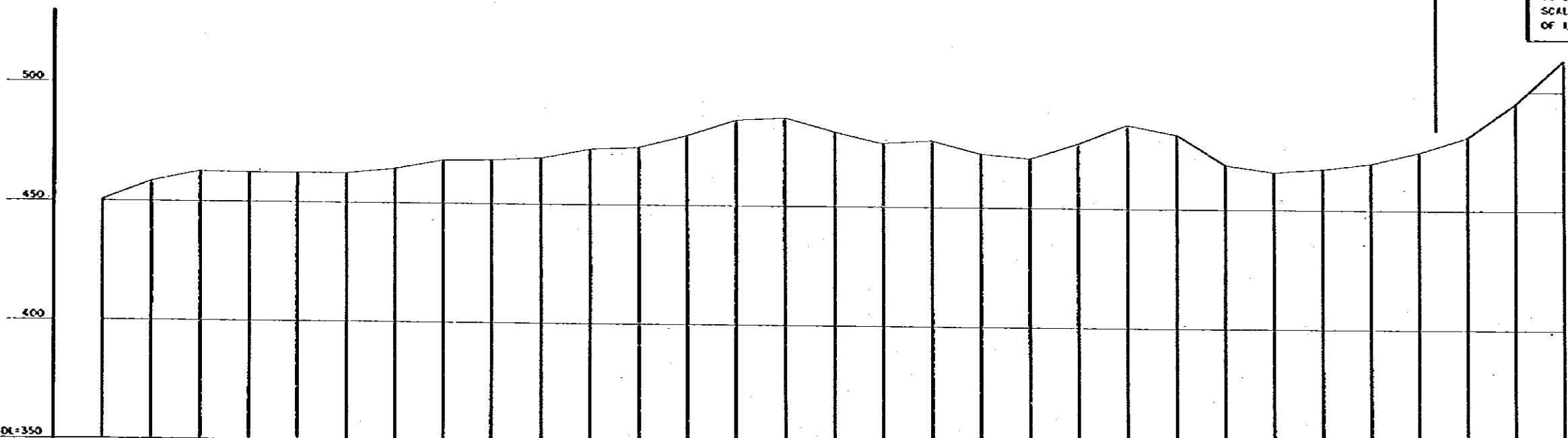
SCALE PLAN 1:10000  
 PROFILE H=1:10000  
 V=1:1000

DATE MARCH 1982  
 SHEET No. 100 OF 135

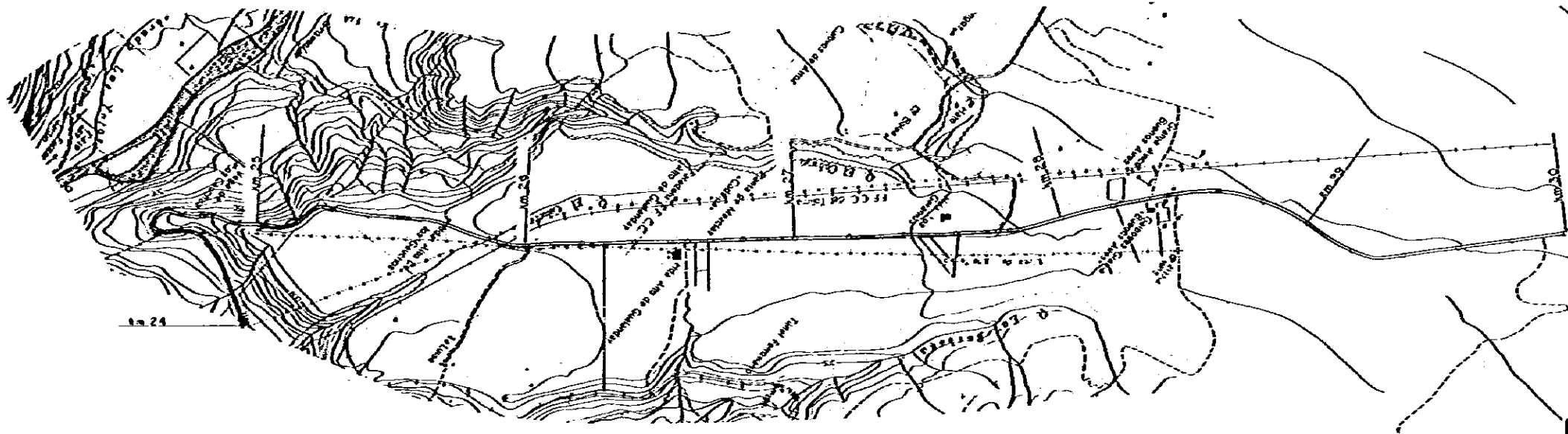


Bridge 0  
Km 23+970  
L=44.30

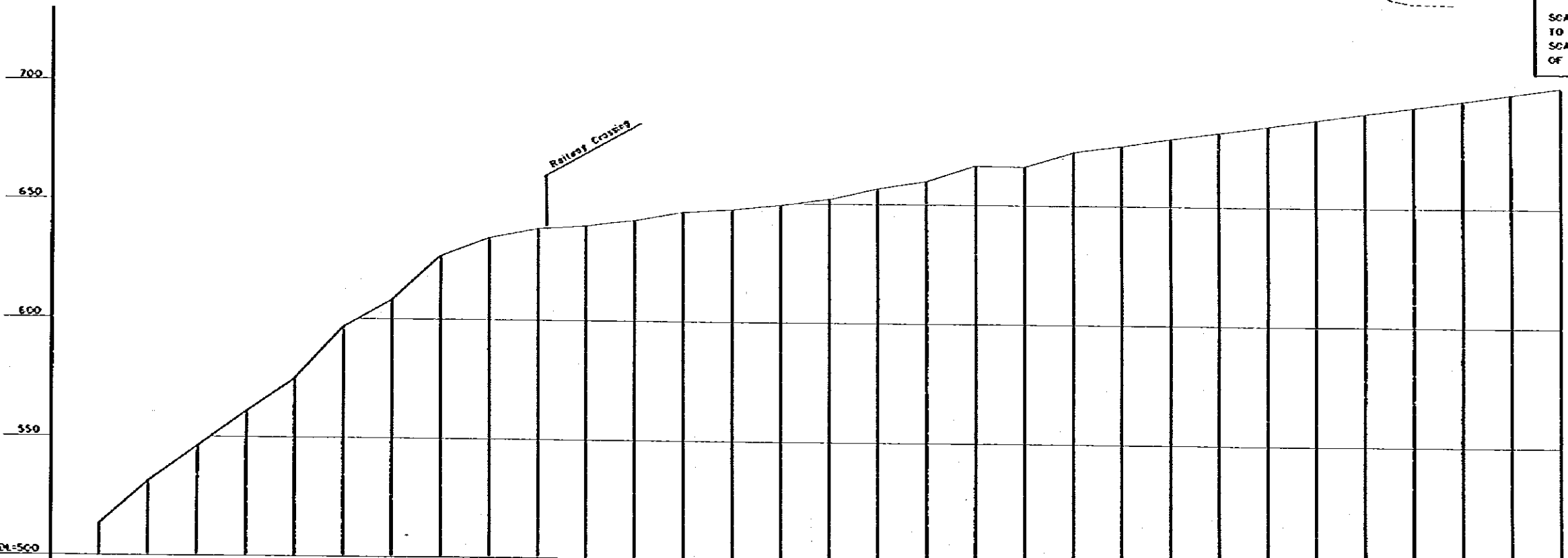
**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY  
 TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE  
 OF 1/2 OF THE ORIGINAL ONE



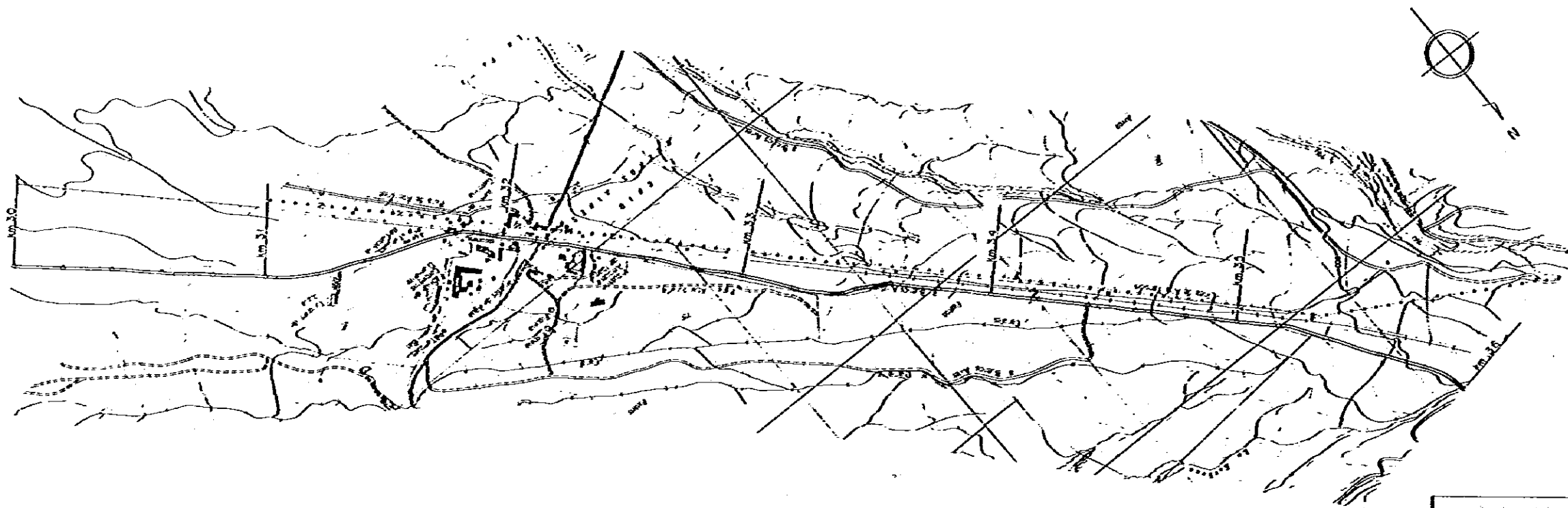
DATUM LINE	OL+350																						
VERTICAL GRADIENT	$\frac{1:2.50\%}{L=110.0}$ $\frac{1:3.50\%}{L=110.0}$ $\frac{1:10.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$ $\frac{1:11.00\%}{L=110.0}$																						
ACCUMULATIVE DISTANCE	KM 18+000 200+ 400+ 600+ 800+ 1000+ 1200+ 1400+ 1600+ 1800+ 2000+ 2200+ 2400+ 2600+ 2800+ 3000+ 3200+ 3400+ 3600+ 3800+ 4000+																						
IN - SITU KM POST	KM 16+000 18+000 20+000 22+000 24+000 26+000 28+000 30+000 32+000 34+000 36+000 38+000 40+000 42+000 44+000 46+000 48+000 50+000 52+000 54+000																						
HORIZONTAL CURVE	19 20 21 22 23 24																						
<b>M O P T</b>	<b>BOGOTA - BUENAVENTURA ROAD PROJECT</b>										<b>UNIMPROVED SECTION (Espinol-Ibogué)</b> KM 18+000 - KM 24+000										SCALE	PLAN 1:10000	DATE MARCH 1982
																						PROFILE 1:10000 V=1:1000	SHEET No. 101 OF 135



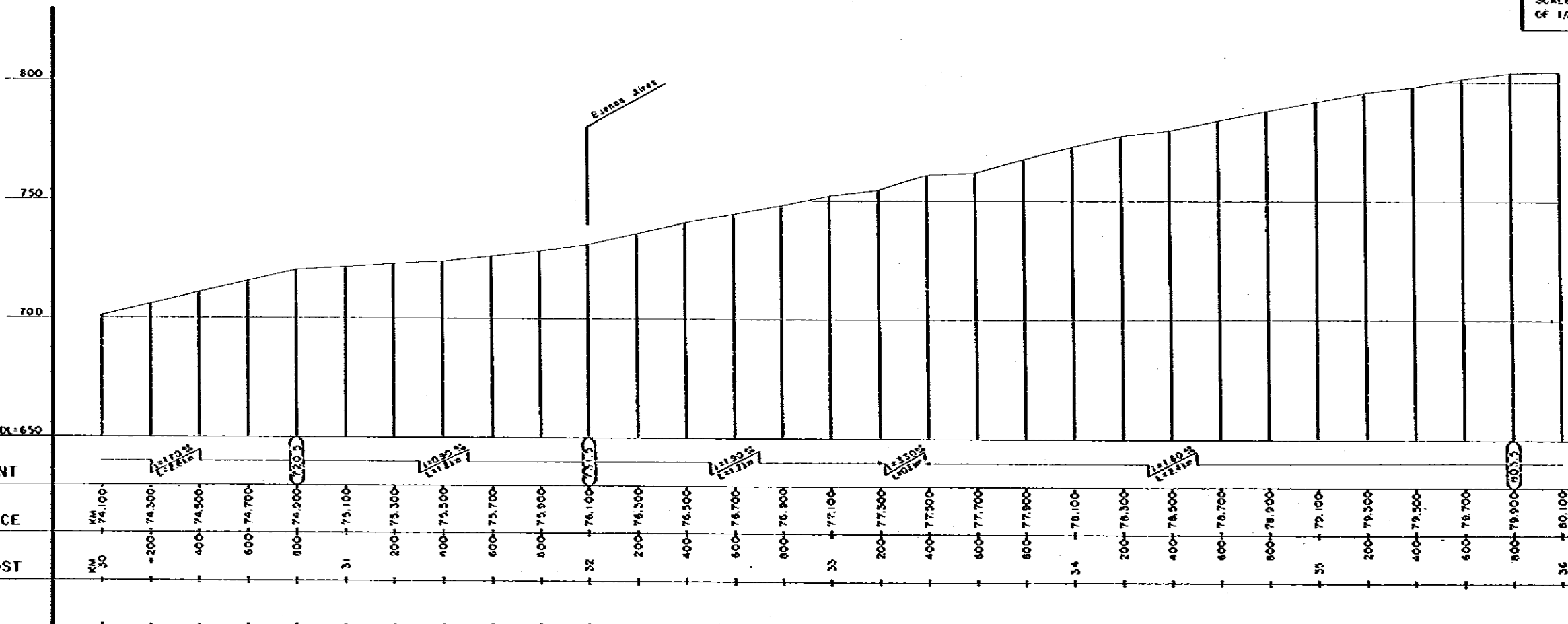
**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE



DATUM LINE	OL=500																														
VERTICAL GRADIENT	$\frac{1:8.10\%}{L=181.0\text{M}}$ $\frac{1:1.82\%}{L=54.6\text{M}}$ $\frac{1:1.82\%}{L=54.6\text{M}}$ $\frac{1:2.22\%}{L=45.0\text{M}}$ $\frac{1:1.70\%}{L=58.8\text{M}}$																														
ACCUMULATIVE DISTANCE	KM 24	200	400	600	800	25	200	400	600	800	26	200	400	600	800	27	200	400	600	800	28	200	400	600	800	29	200	400	600	800	30
IN - SITU KM POST	KM 24	-200	400	600	800	25	200	400	600	800	26	200	400	600	800	27	200	400	600	800	28	200	400	600	800	29	200	400	600	800	30
HORIZONTAL CURVE																															
<b>M O P T</b>	<b>BOGOTA — BUENAVENTURA ROAD PROJECT</b>					<b>UNIMPROVED SECTION (Espinal-Ibogué)</b>										<b>SCALE</b>		<b>PLAN 1:10000</b>		<b>PROFILE R=1:10000 V=1:1000</b>		<b>DATE MARCH 1982</b>		<b>SHEET No. 102 OF 135</b>							
	KM 24+000 — KM 30+000																														

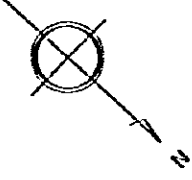


**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY  
 TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE  
 OF 1/2 OF THE ORIGINAL ONE

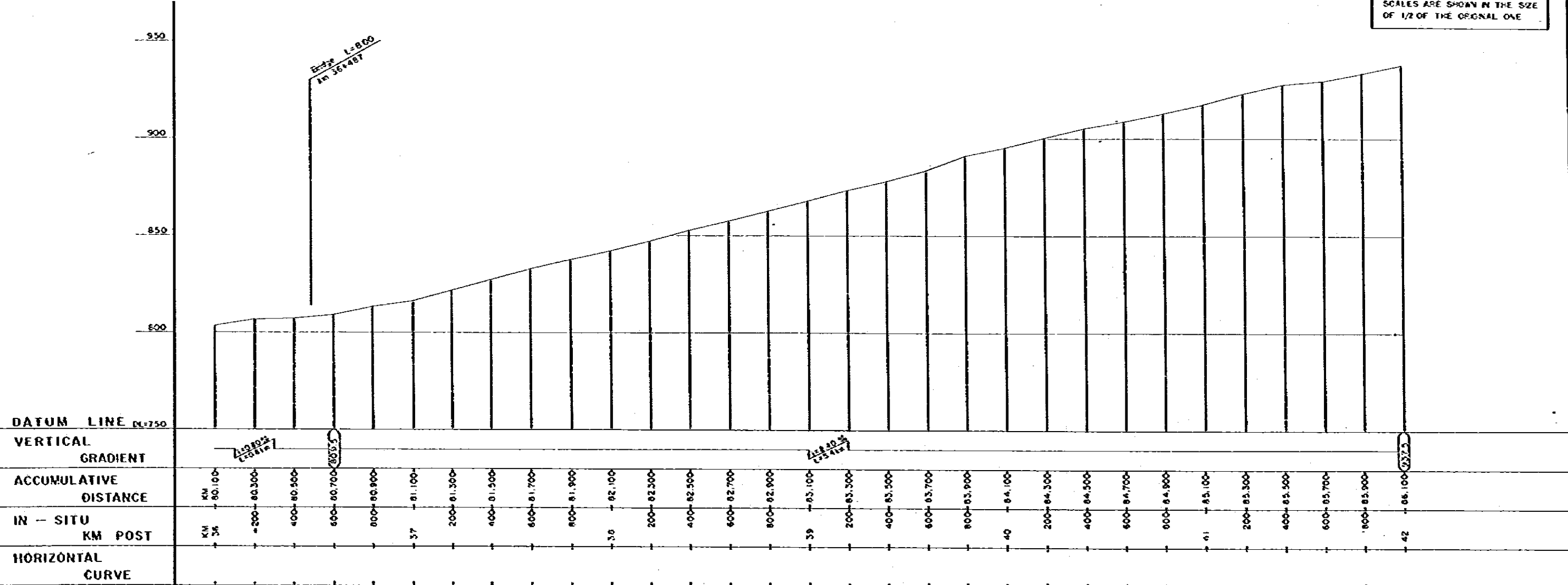


DATUM LINE  $\alpha=650$   
 VERTICAL GRADIENT  
 ACCUMULATIVE DISTANCE  
 IN - SITU KM POST  
 HORIZONTAL CURVE

M O P T	BOGOTA — BUENAVENTURA ROAD PROJECT	UNIMPROVED SECTION (Espinal - Ibagué)		SCALE	PLAN	1:10000	DATE	MARCH 1982
		KM 30+000 — KM 36+000			PROFILE	H=1:10000 V=1:1000		SHEET No. 103 OF 135



**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

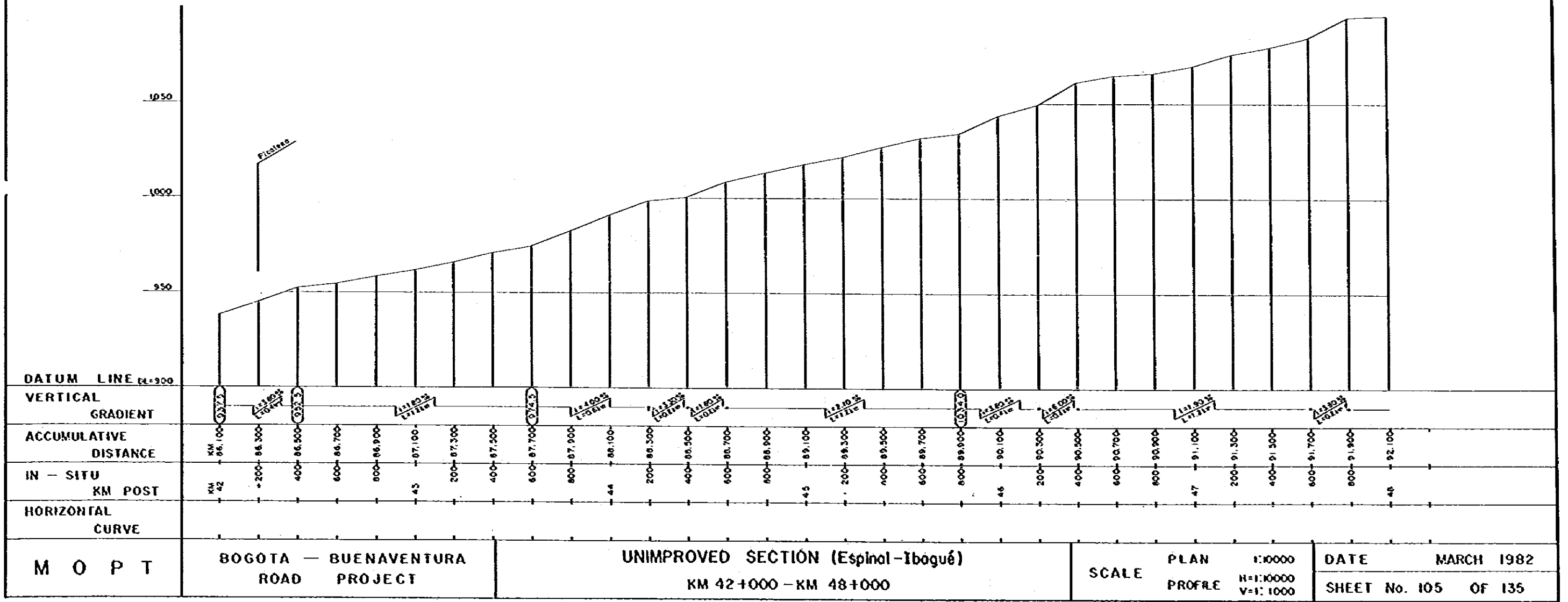
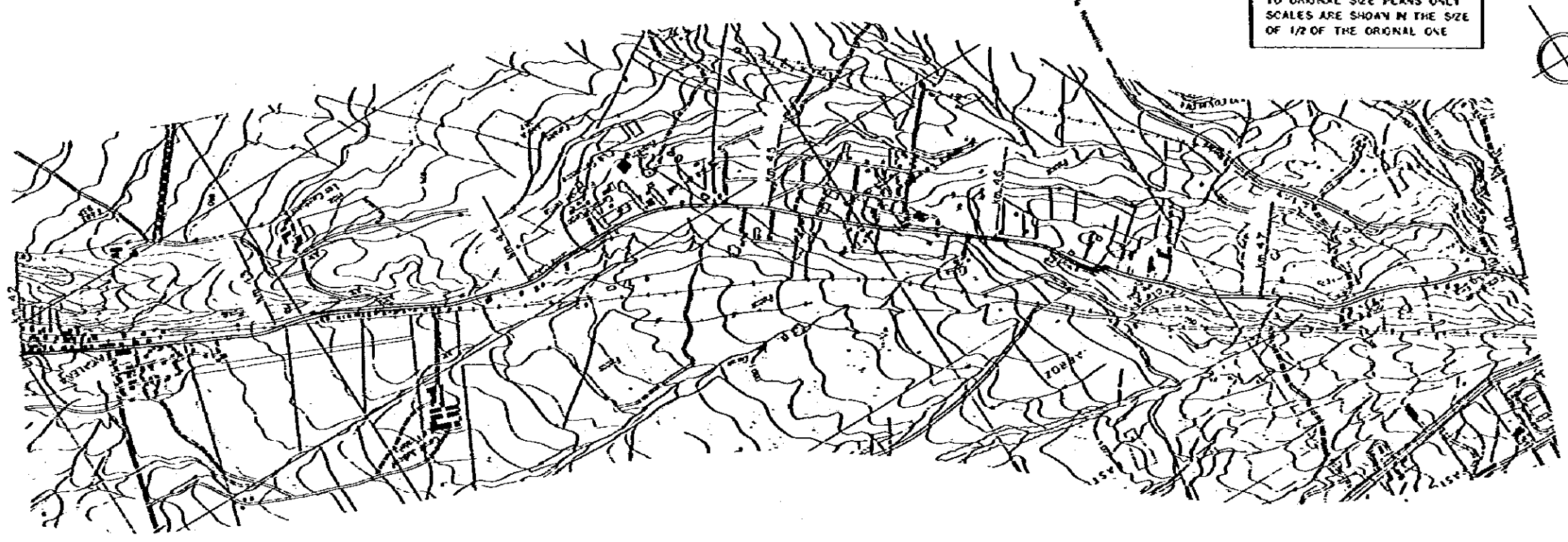


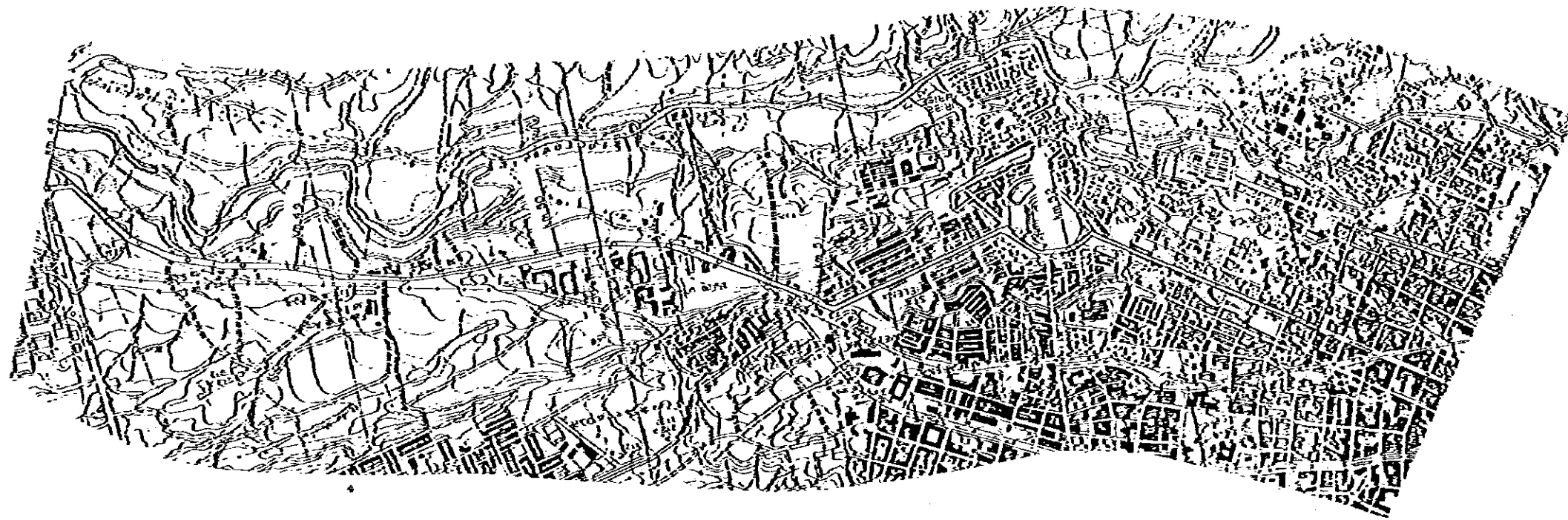
DATUM LINE  $\pm 750$   
 VERTICAL GRADIENT  
 ACCUMULATIVE DISTANCE  
 IN - SITU KM POST  
 HORIZONTAL CURVE

KM	36	36+200	36+400	36+600	36+800	37+000	37+200	37+400	37+600	37+800	38+000	38+200	38+400	38+600	38+800	39+000	39+200	39+400	39+600	39+800	40+000	40+200	40+400	40+600	40+800	41+000	41+200	41+400	41+600	41+800	42+000
ACCUMULATIVE DISTANCE	0	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000	5200	5400	5600	5800	6000
IN - SITU KM POST	36	36+200	36+400	36+600	36+800	37+000	37+200	37+400	37+600	37+800	38+000	38+200	38+400	38+600	38+800	39+000	39+200	39+400	39+600	39+800	40+000	40+200	40+400	40+600	40+800	41+000	41+200	41+400	41+600	41+800	42+000

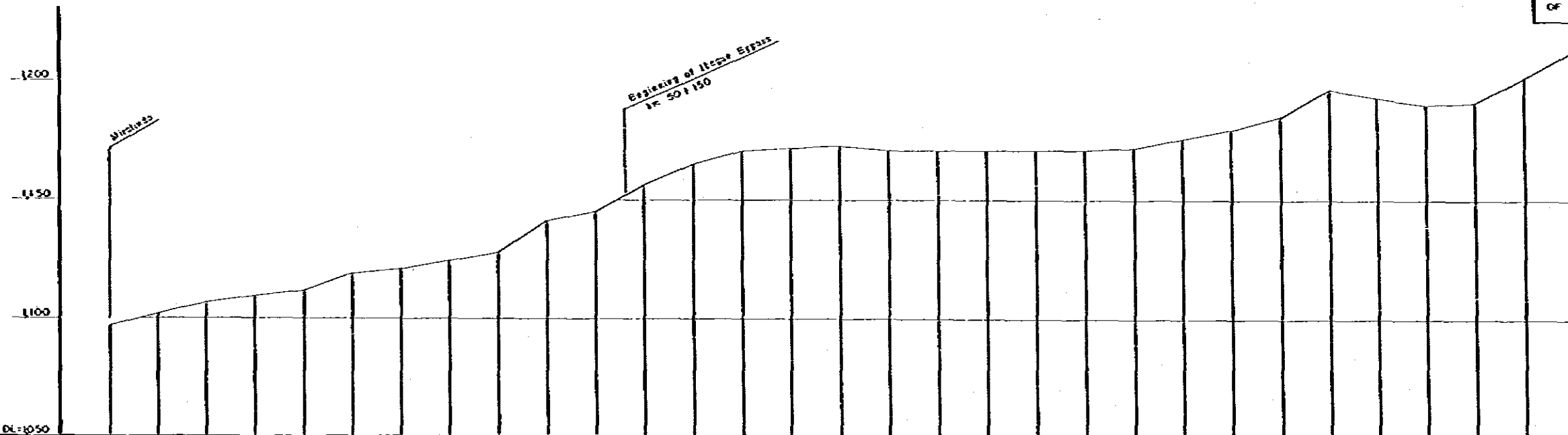
M O P T	BOGOTA — BUENAVENTURA ROAD PROJECT	UNIMPROVED SECTION (Espinal-Ibogué) KM 36+000 — KM 42+000	SCALE	PLAN 1:10000	DATE MARCH 1982
				PROFILE H=1:10000 V=1:1000	SHEET No. 104 OF 135

**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY  
 TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE  
 OF 1/2 OF THE ORIGINAL ONE

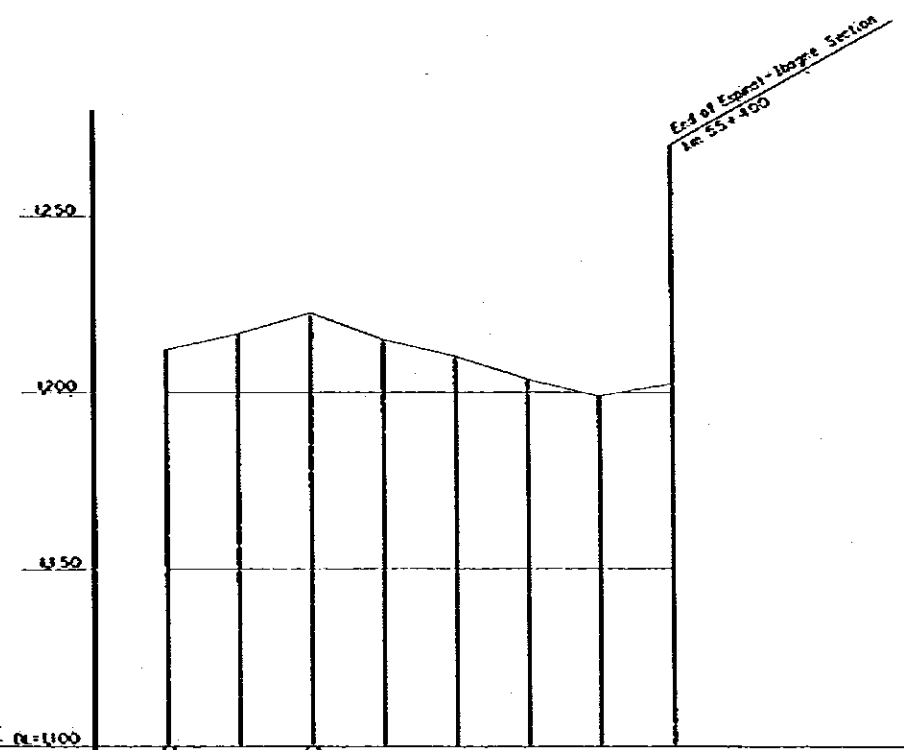
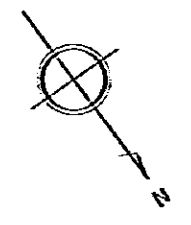
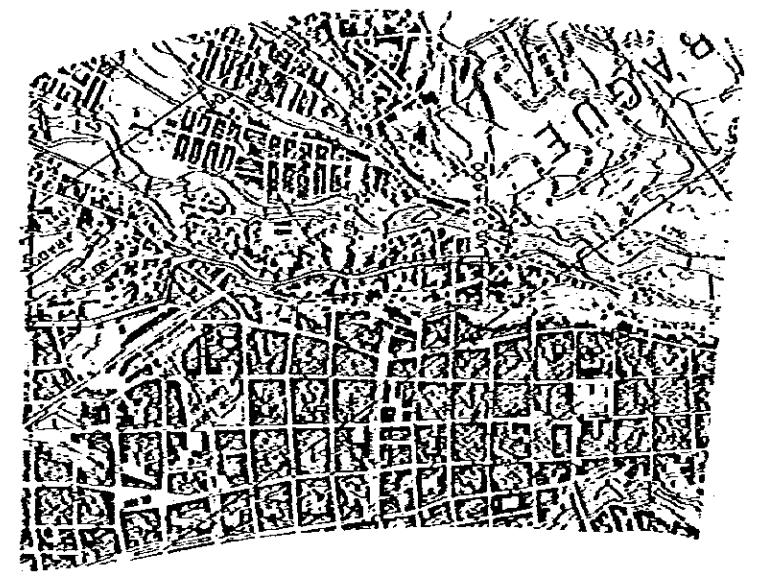




**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL CASE



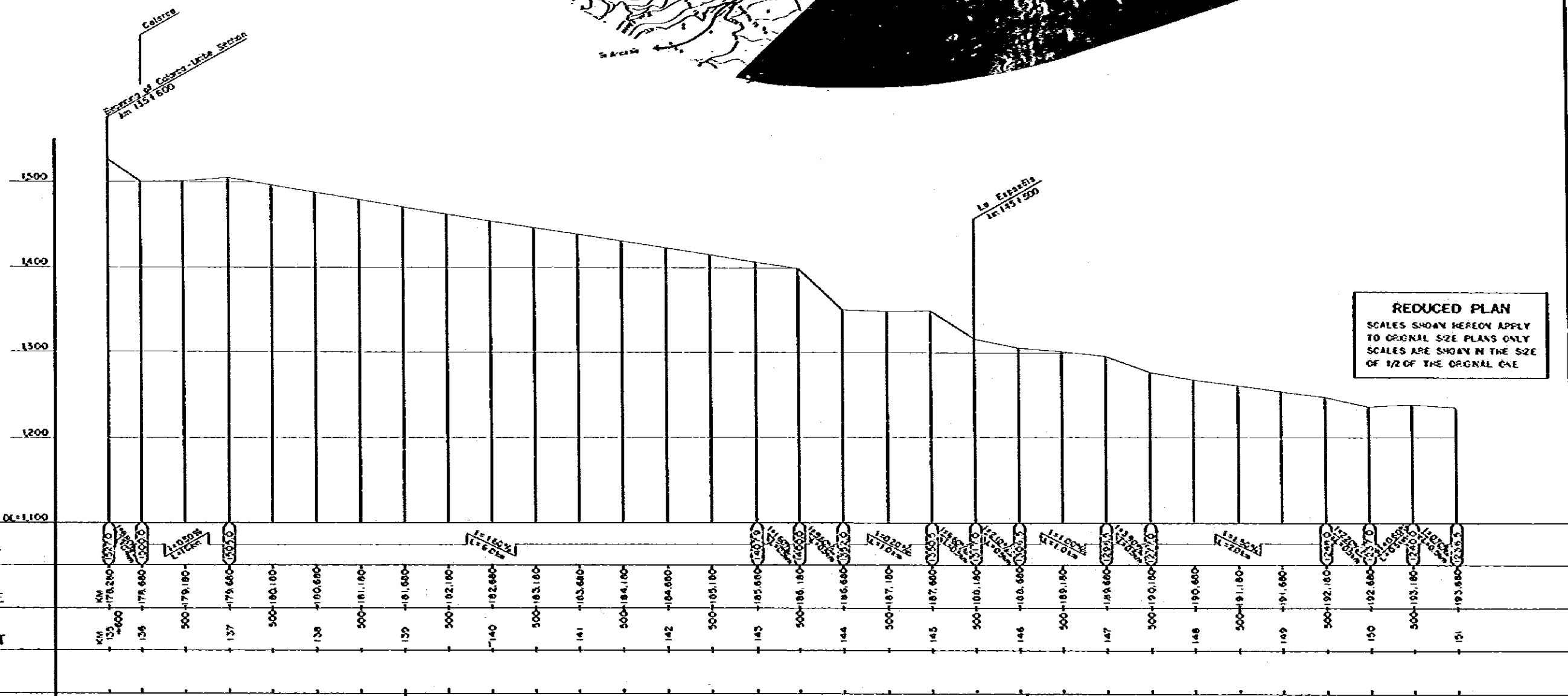
DATUM LINE DL=1050																															
VERTICAL GRADIENT	$\frac{1:2.00\%}{L=1.00\text{km}}$ $\frac{1:2.20\%}{L=1.00\text{km}}$ $\frac{1:1.50\%}{L=1.00\text{km}}$ $\frac{1:1.50\%}{L=1.00\text{km}}$ $\frac{1:1.30\%}{L=1.00\text{km}}$ $\frac{1:1.30\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$ $\frac{1:1.00\%}{L=1.00\text{km}}$																														
ACCUMULATIVE DISTANCE	KM 88	92.00	92.500	93.000	93.500	94.000	94.500	95.000	95.500	96.000	96.500	97.000	97.500	98.000	98.500	99.000															
IN - SITU KM POST	48	200	400	600	800	49	200	400	600	800	50	200	400	600	800	51	200	400	600	800	52	200	400	600	800	53	200	400	600	800	54
HORIZONTAL CURVE																															



**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

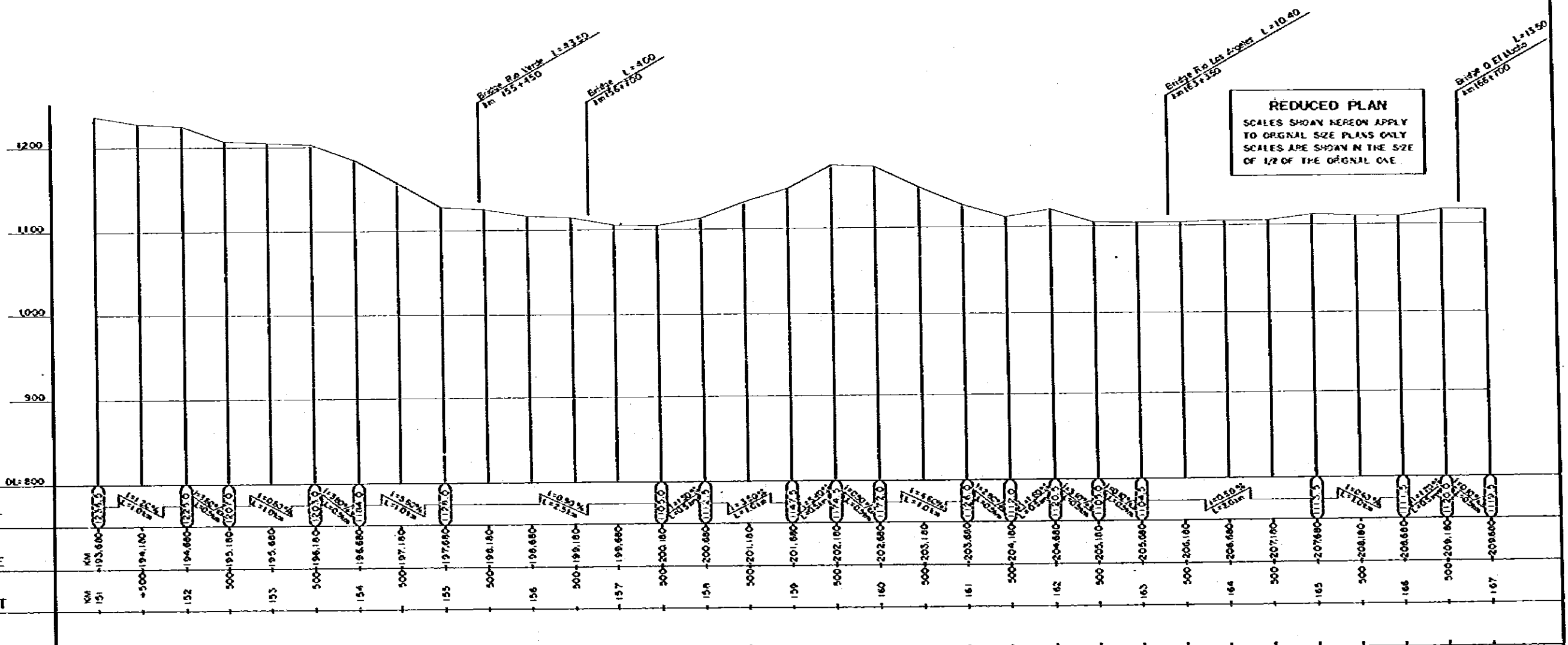
DATUM LINE	1100	
VERTICAL GRADIENT		
ACCUMULATIVE DISTANCE	KM 98.100, 98.300, 98.500, 98.700, 98.900, 99.100, 99.300, 99.500	
IN - SITU KM POST	KM 54, +200, 400, 600, 800, 55, 200, 400	
HORIZONTAL CURVE		
<b>M O P T</b>	<b>BOGOTA — BUENAVENTURA ROAD PROJECT</b>	<b>UNIMPROVED SECTION (Espinal-Ibagué)</b> KM 54+000 — KM 55+400
	SCALE PLAN 1:10000 PROFILE H=1:10000 V=1:1000	DATE MARCH 1982 SHEET No. 107 OF 135





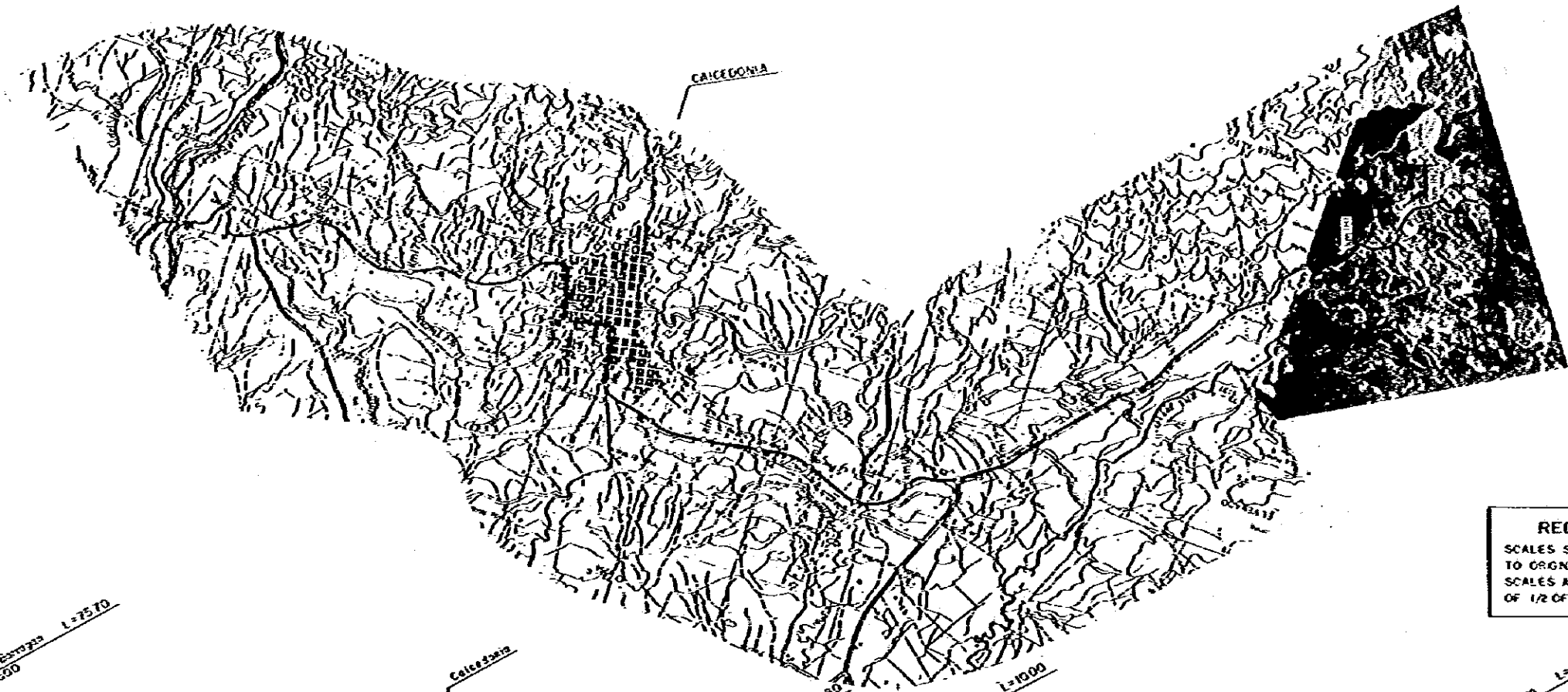
**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

DATUM LINE	α = 1100														
VERTICAL GRADIENT	<div style="display: flex; justify-content: space-between;"> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> <span>1:10.00%</span> </div>														
ACCUMULATIVE DISTANCE	<div style="display: flex; justify-content: space-between;"> <span>KM 1773.200</span> <span>KM 1774.600</span> <span>KM 1776.000</span> <span>KM 1777.400</span> <span>KM 1778.800</span> <span>KM 1780.200</span> <span>KM 1781.600</span> <span>KM 1783.000</span> <span>KM 1784.400</span> <span>KM 1785.800</span> <span>KM 1787.200</span> <span>KM 1788.600</span> <span>KM 1790.000</span> <span>KM 1791.400</span> <span>KM 1792.800</span> </div>														
IN - SITU KM POST	<div style="display: flex; justify-content: space-between;"> <span>135</span> <span>136</span> <span>137</span> <span>138</span> <span>139</span> <span>140</span> <span>141</span> <span>142</span> <span>143</span> <span>144</span> <span>145</span> <span>146</span> <span>147</span> <span>148</span> <span>149</span> </div>														
HORIZONTAL CURVE															

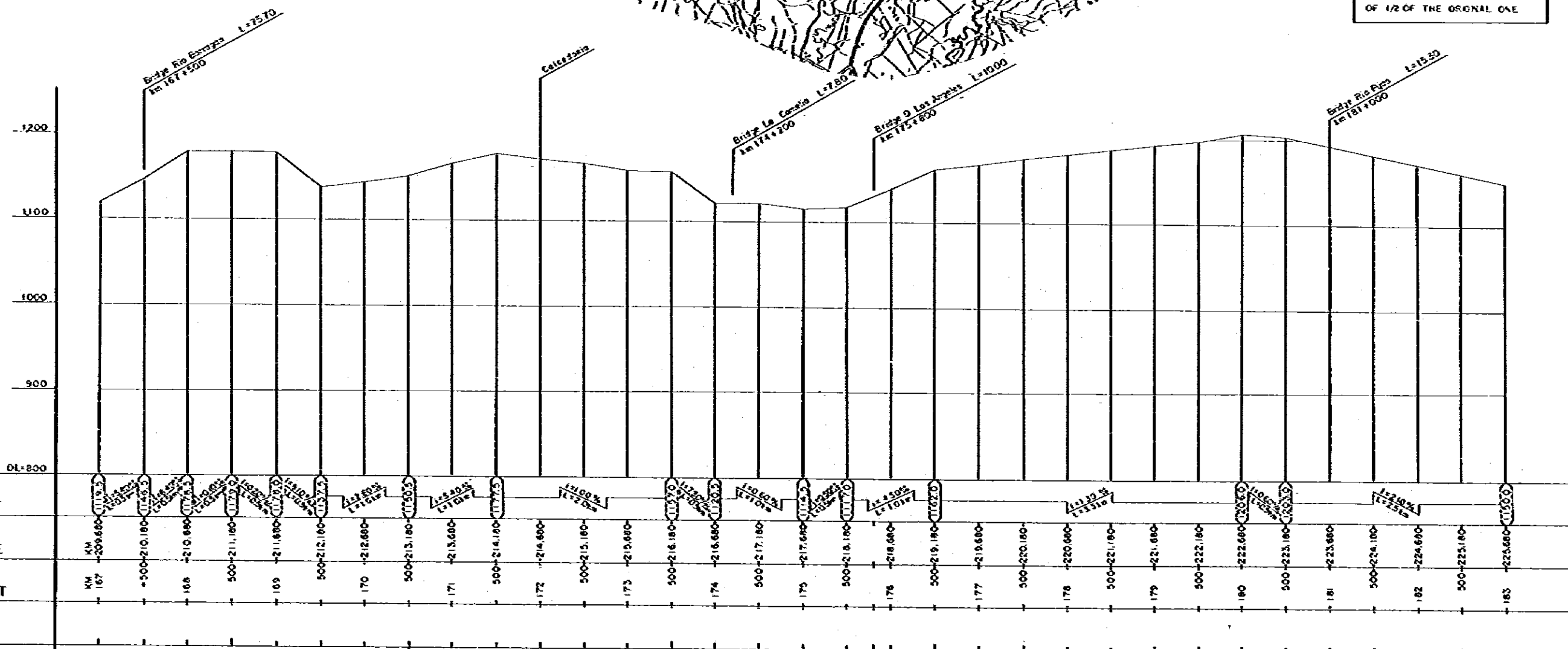


DATUM LINE  
 OL: 800  
 VERTICAL GRADIENT  
 ACCUMULATIVE DISTANCE  
 IN - SITU KM POST  
 HORIZONTAL CURVE

151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

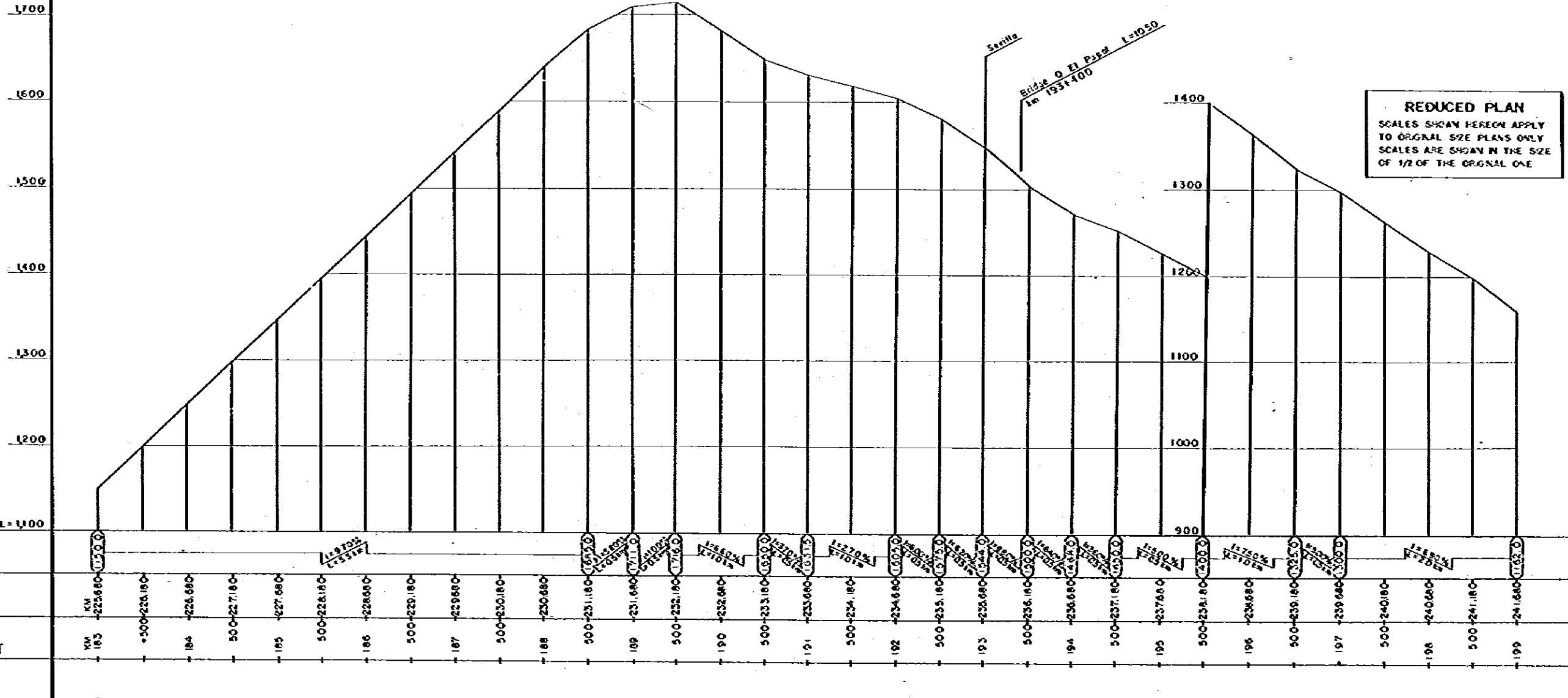
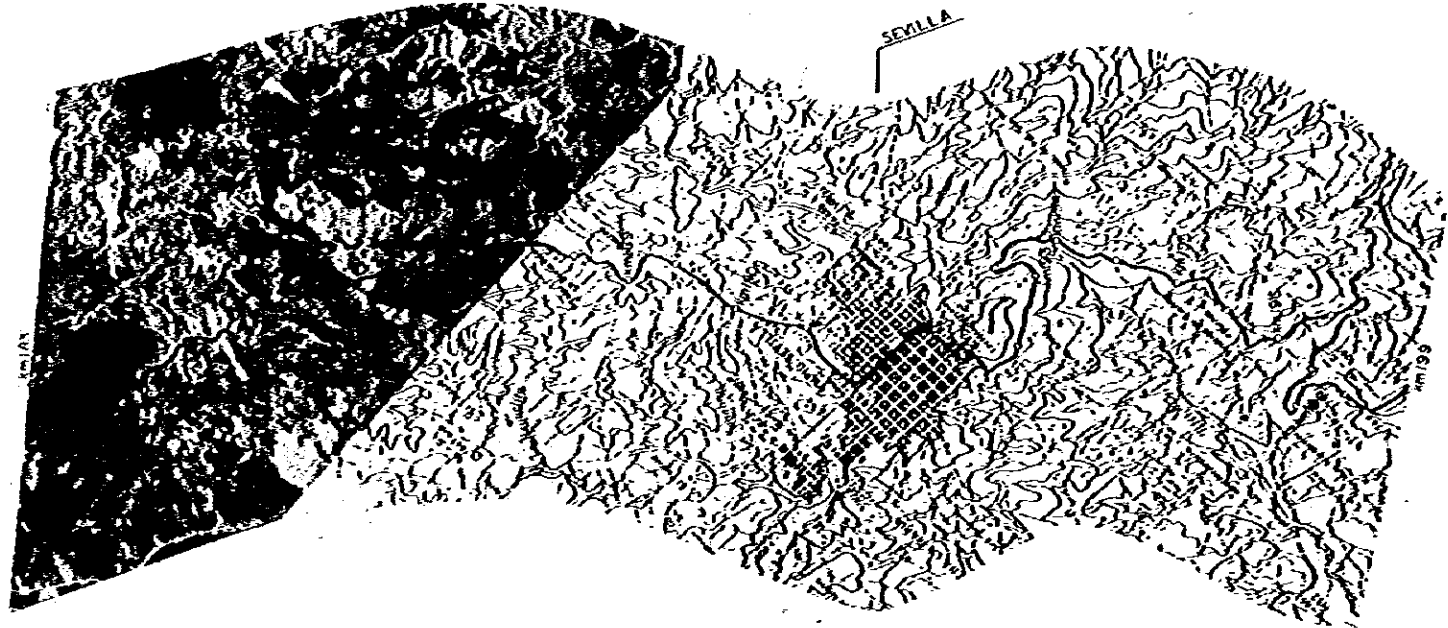


**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE



DATUM LINE 0L+800  
 VERTICAL GRADIENT  
 ACCUMULATIVE DISTANCE  
 IN - SITU KM POST  
 HORIZONTAL CURVE

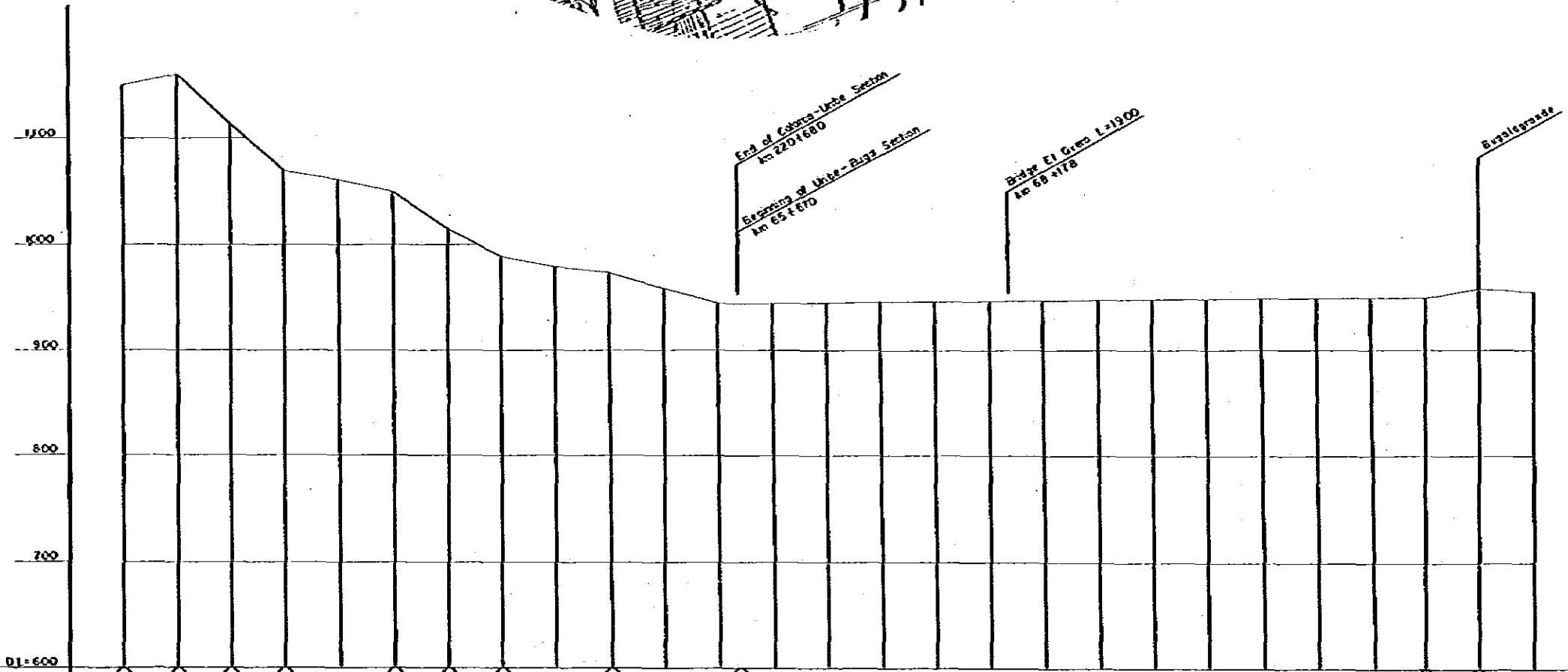
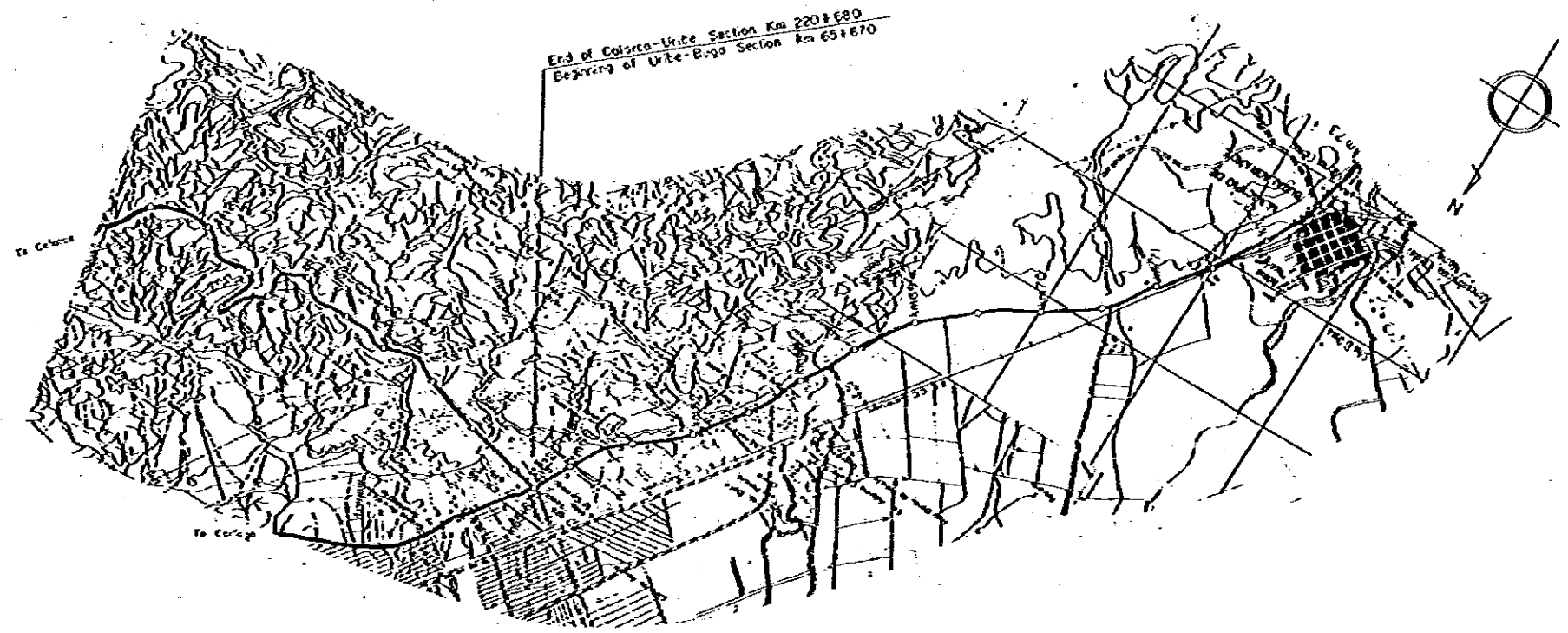
M O P T	BOGOTA — BUENAVENTURA ROAD PROJECT	UNIMPROVED SECTION (Calarca — Uribe) KM 167+000 — KM 183+000	SCALE	PLAN 1:25000	DATE	MARCH 1982
				PROFILE H: 1:25000 V: 1: 2500	SHEET No. 110	OF 135



DATUM LINE DL=1100  
 VERTICAL GRADIENT  
 ACCUMULATIVE DISTANCE  
 IN - SITU KM POST  
 HORIZONTAL CURVE

M O P T	BOGOTA — BUENAVENTURA ROAD PROJECT	UNIMPROVED SECTION (Colorca - Uribe) KM 183+000 - KM 199+000	SCALE	PLAN 1:25000	DATE MARCH 1982
				PROFILE H=1:25000 V=1:2500	SHEET No. III OF 135



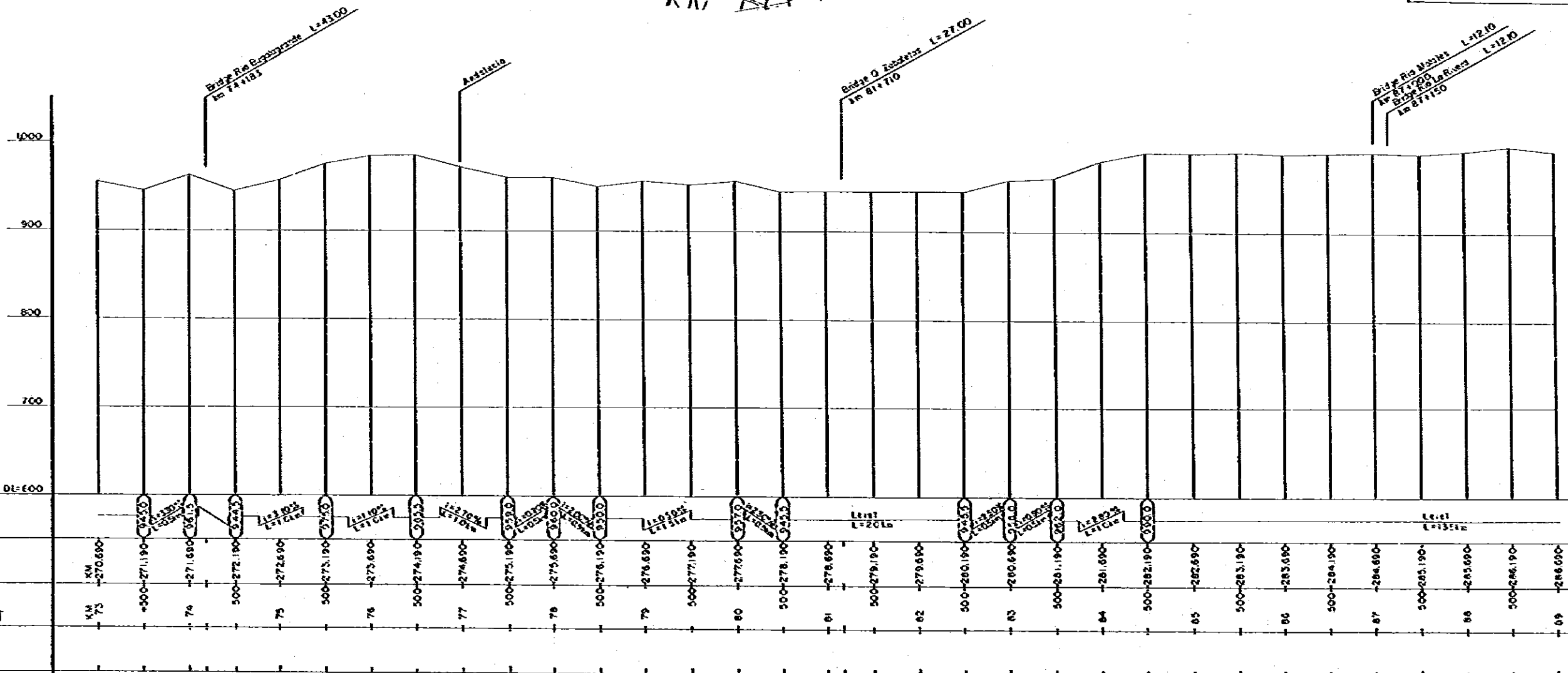


**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

DATUM LINE	01+600														
VERTICAL GRADIENT															
ACCUMULATIVE DISTANCE	KM 215+000, 216+000, 217+000, 218+000, 219+000, 220+000, 221+000, 222+000, 223+000, 224+000, 225+000, 226+000, 227+000, 228+000, 229+000, 230+000														
IN - SITU KM POST	215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230														
HORIZONTAL CURVE															



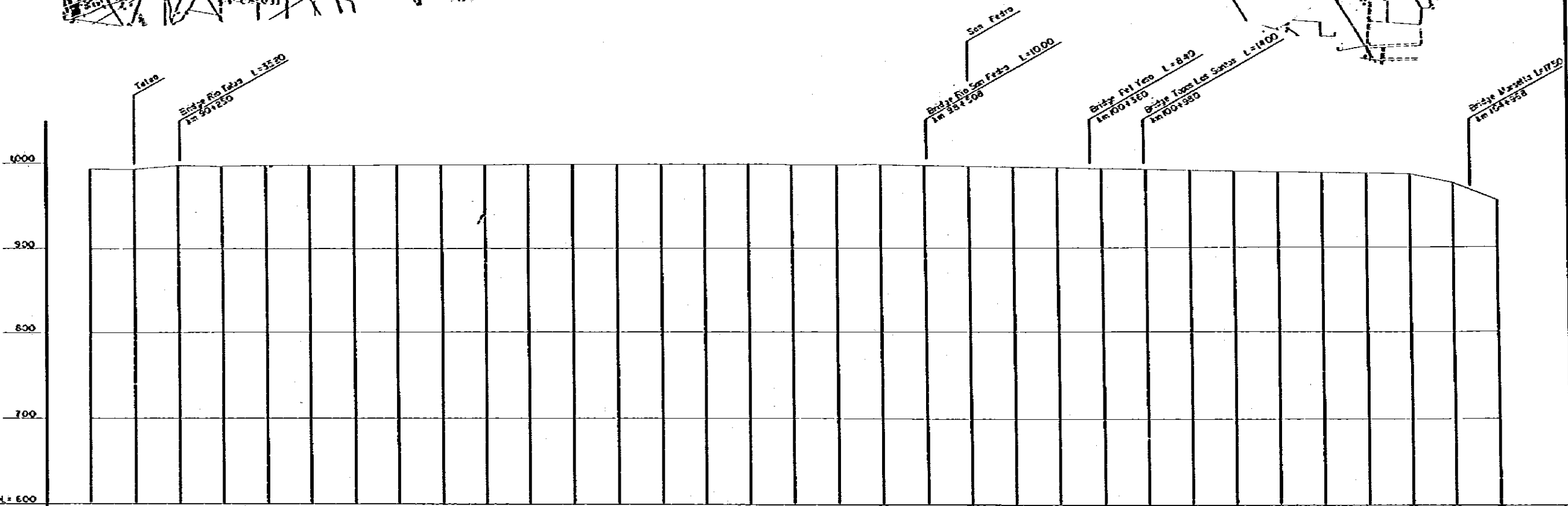
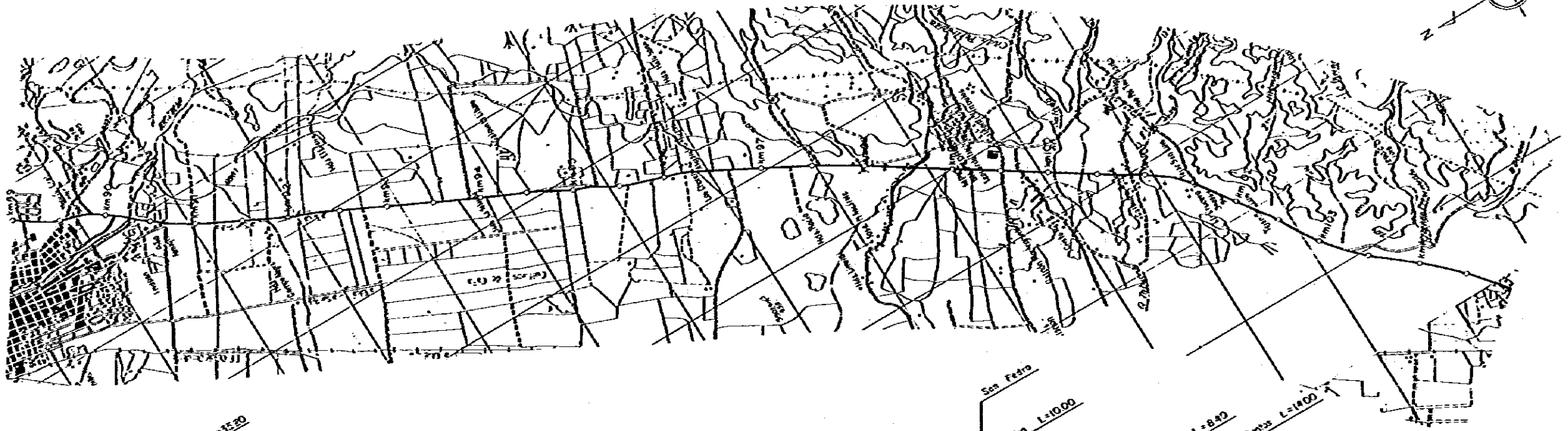
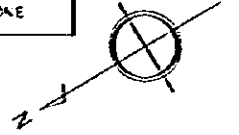
**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE



DATUM LINE	DL: 600
VERTICAL GRADIENT	
ACCUMULATIVE DISTANCE	KM
IN - SITU KM POST	73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89
HORIZONTAL CURVE	

<b>M O P T</b>	BOGOTA — BUENAVENTURA ROAD PROJECT	UNIMPROVED SECTION (Uribe - Buga) KM 73+000 - KM 89+000	SCALE	PLAN 1:25000 PROFILE H:1:25000 V:1:2500	DATE	MARCH 1982
					SHEET No. 114	OF 135

**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY  
 TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE  
 OF 1/2 OF THE ORIGINAL ONE



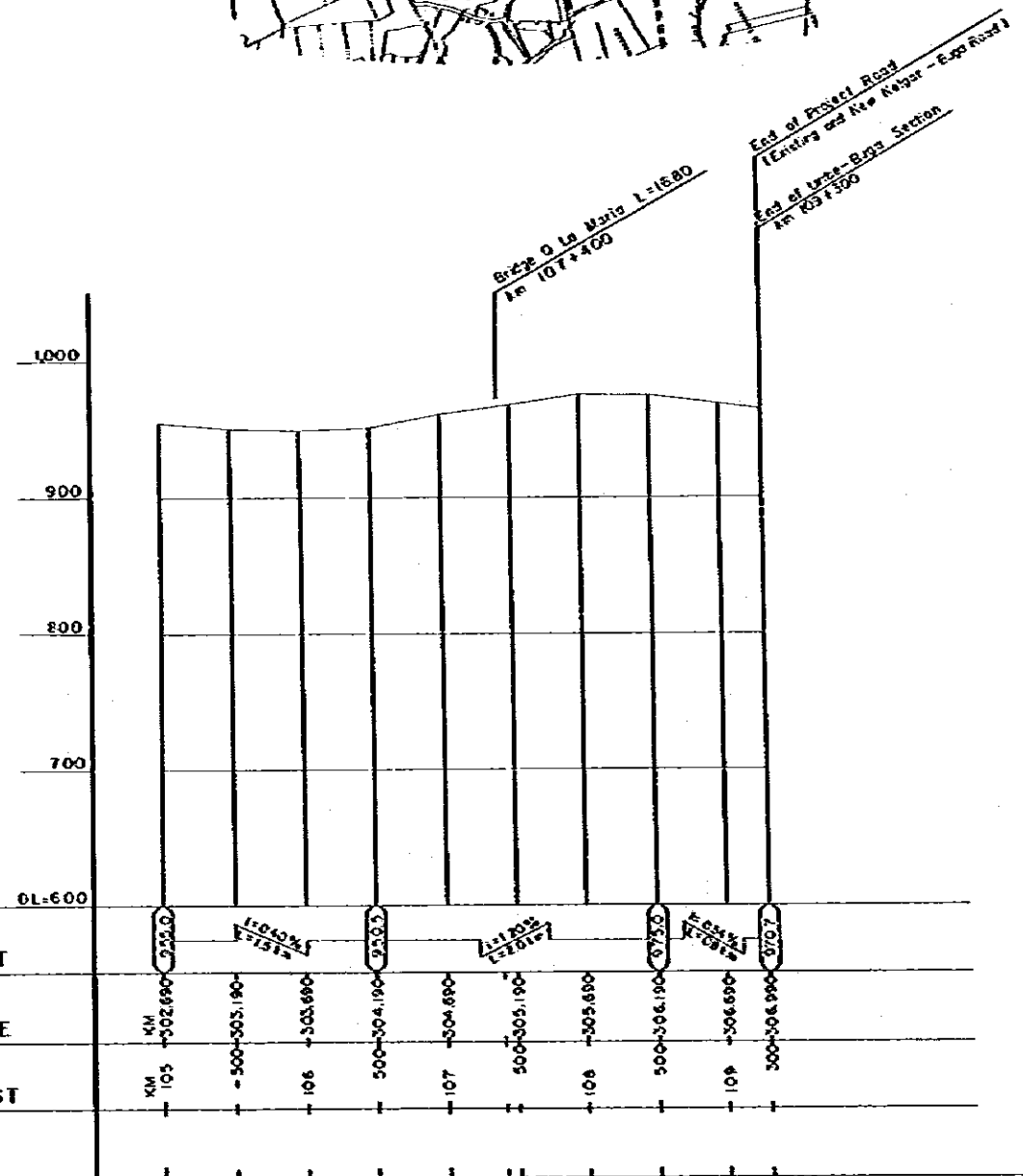
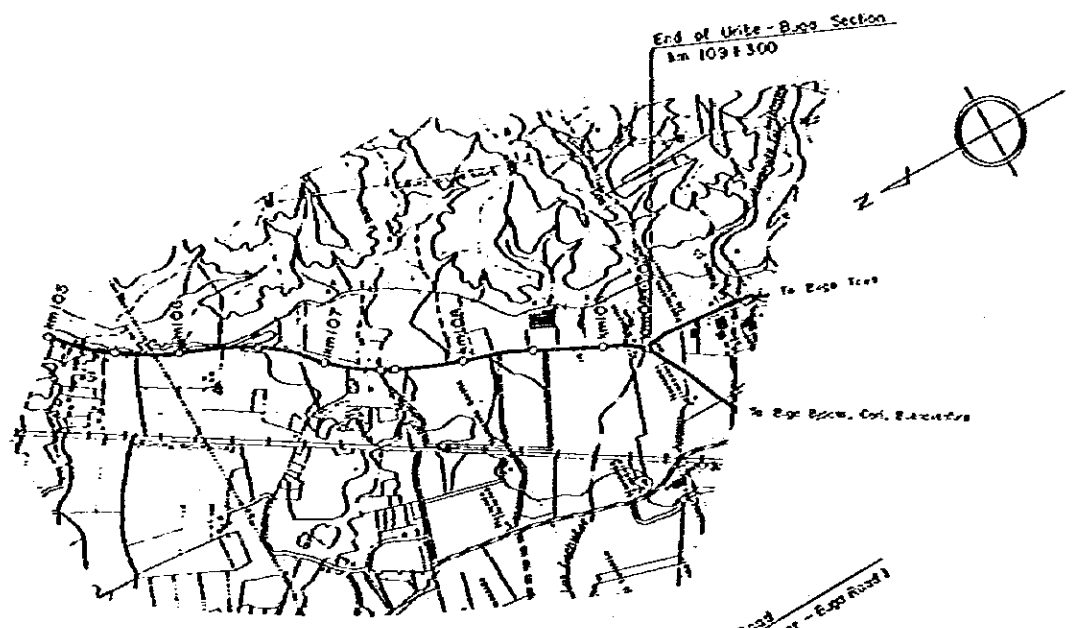
DATUM LINE DL = 600

VERTICAL GRADIENT  
 ACCUMULATIVE DISTANCE  
 IN - SITU KM POST  
 HORIZONTAL CURVE

VERTICAL GRADIENT	Level L=135%																																
ACCUMULATIVE DISTANCE	KM 89+006.690	89+500+287.190	89+500+287.690	89+500+288.190	89+500+288.690	89+500+289.190	89+500+289.690	89+500+290.190	89+500+290.690	89+500+291.190	89+500+291.690	89+500+292.190	89+500+292.690	89+500+293.190	89+500+293.690	89+500+294.190	89+500+294.690	89+500+295.190	89+500+295.690	89+500+296.190	89+500+296.690	89+500+297.190	89+500+297.690	89+500+298.190	89+500+298.690	89+500+299.190	89+500+299.690	89+500+300.190	89+500+300.690	89+500+301.190	89+500+301.690	89+500+302.190	89+500+302.690
IN - SITU KM POST	89	90	90	91	91	92	92	93	93	94	94	95	95	96	96	97	97	98	98	99	99	100	100	101	101	102	102	103	103	104	104	105	105
HORIZONTAL CURVE																																	

M O P T	BOGOTA — BUENAVENTURA ROAD PROJECT	UNIMPROVED SECTION (Uribe - Bugo) KM 89+000 - KM 105+000	SCALE	PLAN 1:25000	DATE MARCH 1982
				PROFILE H=1:25000 V=1:2500	SHEET No. 115 OF 135





**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

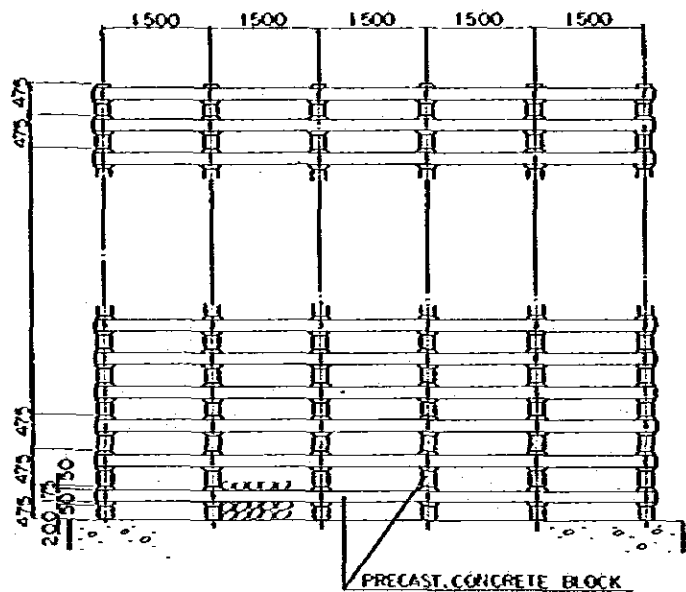
M O P T	BOGOTÁ — BUENAVENTURA ROAD PROJECT	UNIMPROVED SECTION (Uribe - Bugo) KM 105+000 - KM 109+300	SCALE	PLAN 1:25000	DATE MARCH 1982
				PROFILE H=1:25000 V=1:2500	SHEET No. 116 OF 135

### 3 BRIDGES AND STRUCTURES

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TYPICAL P.C BRIDGE (L=40.0 <sup>M</sup> )	121
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Q. LOSMARIAS BRIDGE (KM 97+500)	123
Q. PERAILIS BRIDGE (KM 101+200)	124
RIO MAGDANELA BRIDGE (GIRALDŌT BYPASS)	125
RIO COMBEIMA BRIDGE (IBAGUE BYPASS)	126

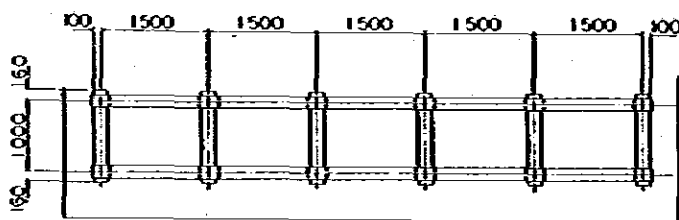
RETAINING WALL  
CRIB TYPE S=1:50

FRONT ELEVATION

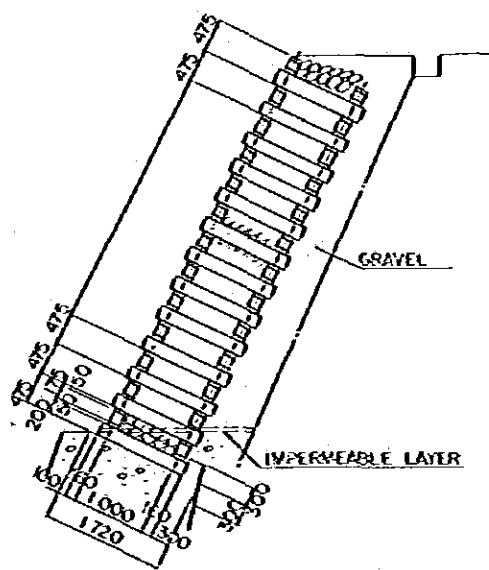


PRECAST CONCRETE BLOCK

PLAN

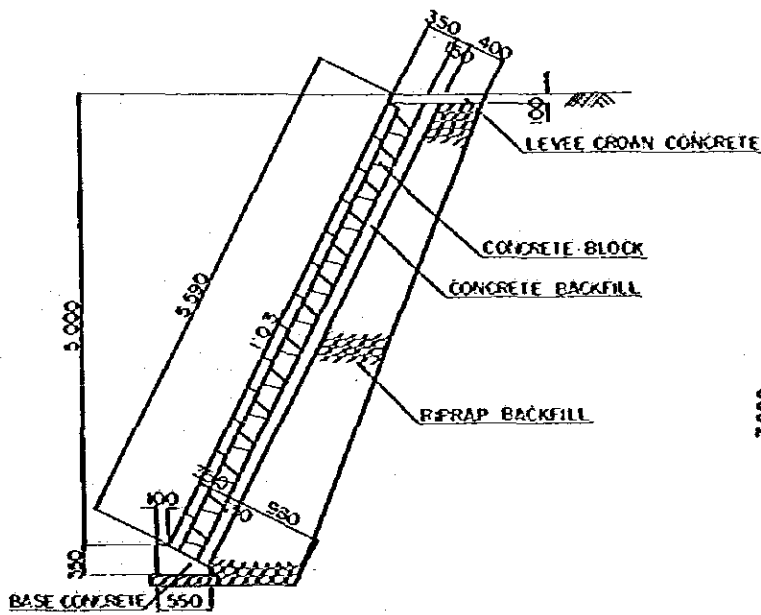


SIDE ELEVATION

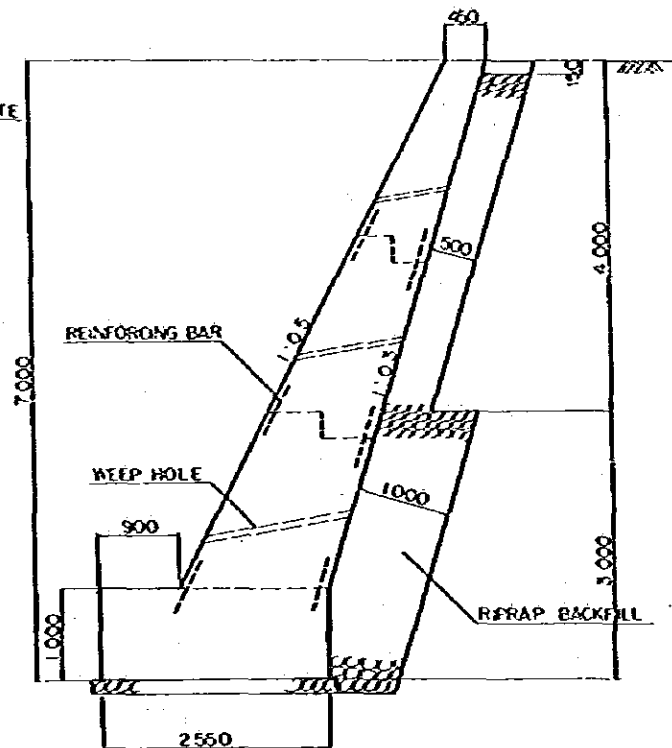


STRUCTURE FOR SLOPE PROTECTION

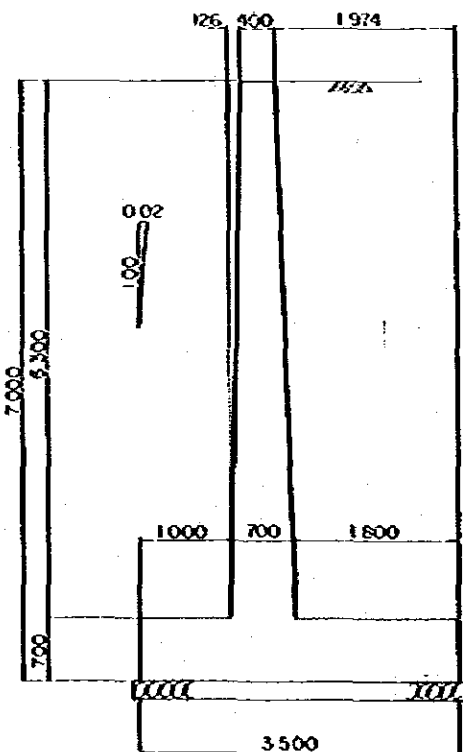
"A" BLOCK TYPE S=1:40



"B" LEANING TYPE S=1:40

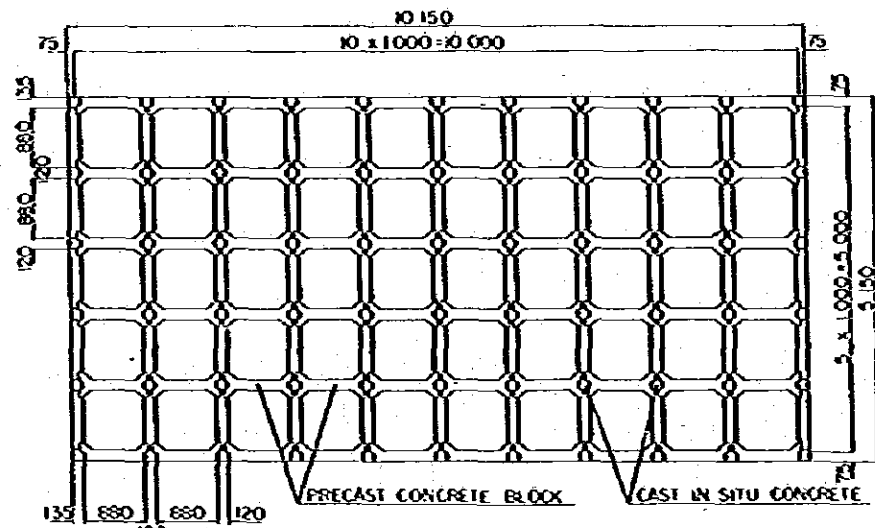


REINFORCED CONCRETE TYPE  
(H=7.0M)

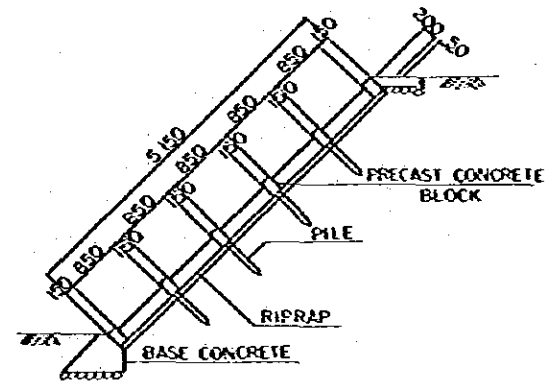


"C" FLAME TYPE S=1:50

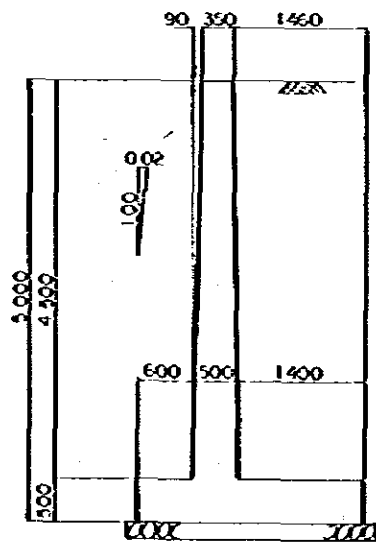
FRONT ELEVATION



SIDE ELEVATION



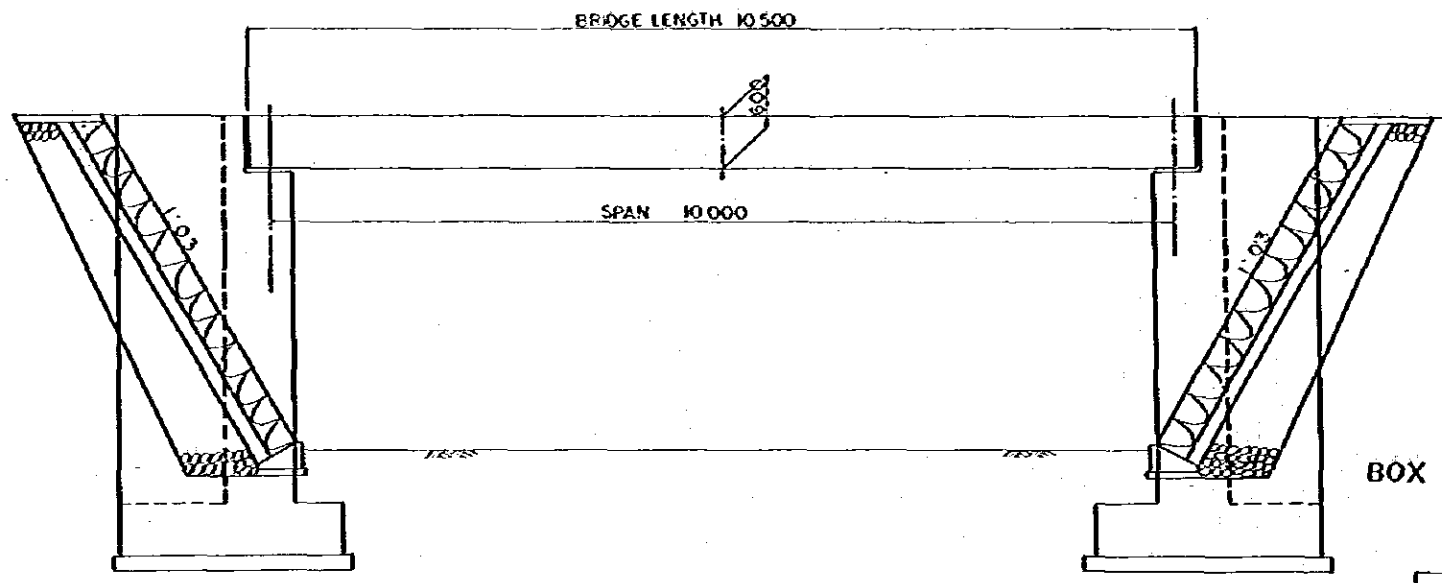
REINFORCED CONCRETE TYPE  
(H=5.0M)



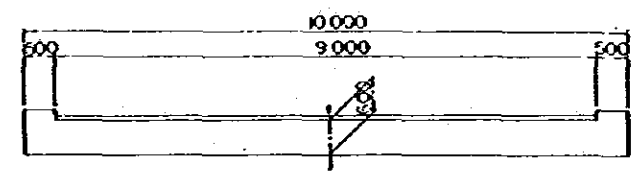
REDUCED PLAN  
SCALES SHOWN HEREON APPLY  
TO ORIGINAL SIZE PLANS ONLY  
SCALES ARE SHOWN IN THE SIZE  
OF 1/2 OF THE ORIGINAL ONE

REINFORCED CONCRETE BRIDGES

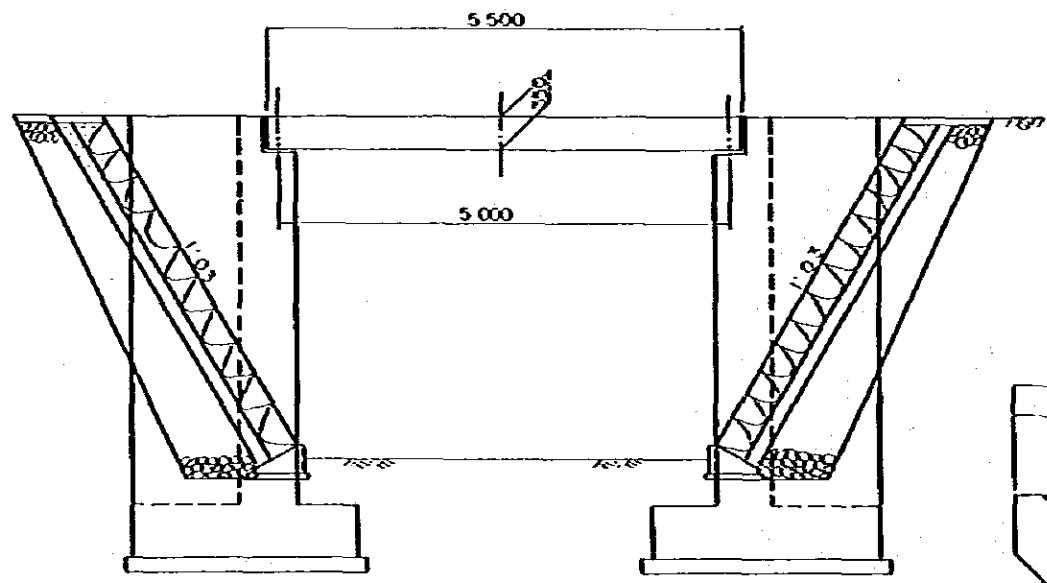
R.C SLAB BRIDGE (L=10.0M) S=1:40  
ELEVATION



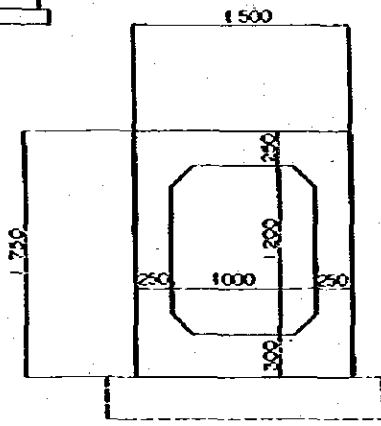
TYPICAL CROSS SECTION OF R.C SLAB BRIDGE S=1:60



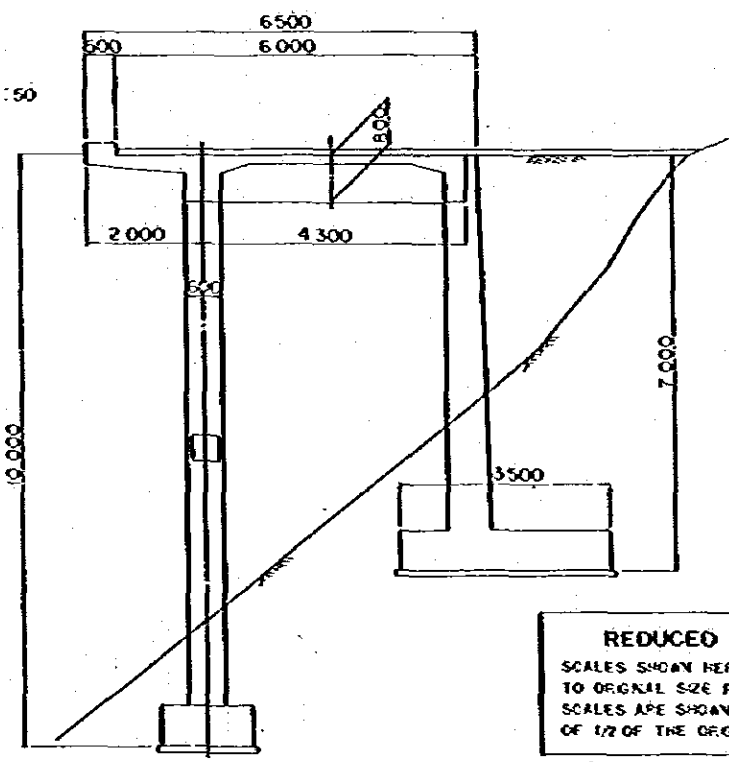
R.C SLAB BRIDGE (L=5.0M) S=1:40  
ELEVATION



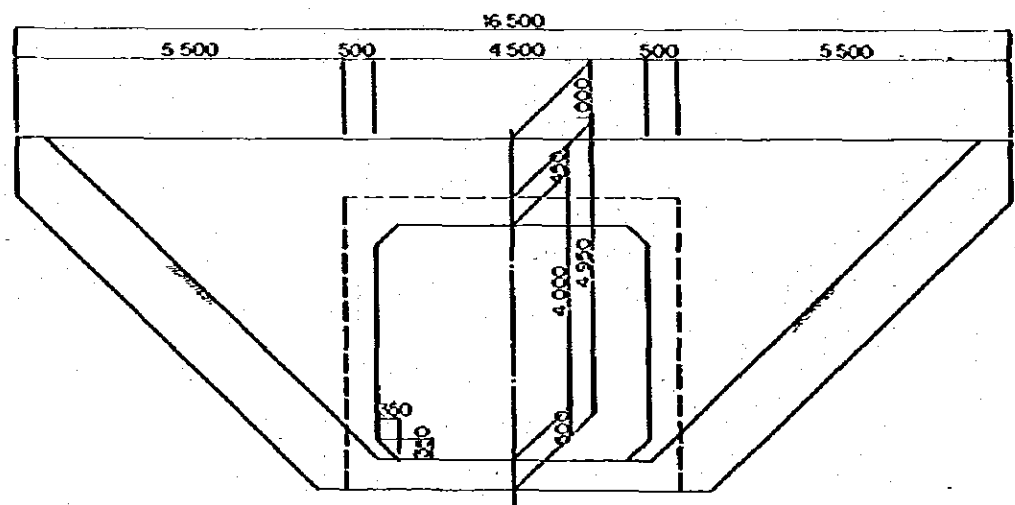
BOX CULVERT 100x120 S=1:50



CROSS SECTION OF HALF BRIDGE S=1:60



BOX CULVERT S=1:60



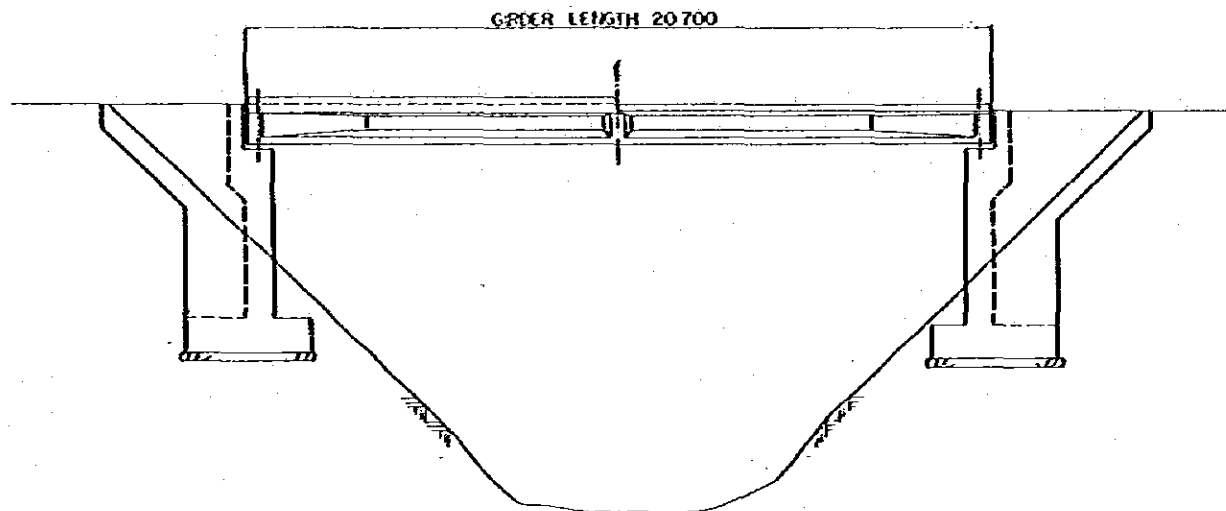
REDUCED PLAN  
SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

- DESIGN CRITERIA
- JRA STANDARD SPECIFICATION FOR HIGHWAY BRIDGES 1979 EDITIONS.
  - CONCRETE MINIMUM COMPRESSIVE STRENGTH  
SUPER STRUCTURE 210<sup>kg/cm<sup>2</sup></sup> AT 28 DAYS  
SUB STRUCTURE 210<sup>kg/cm<sup>2</sup></sup> AT 28 DAYS
  - ALL REINFORCING BAR TO HAVE A YIELD POINT STRESS OF  $f_y = 3000^{kg/cm^2}$
- JRA: JAPAN ROAD ASSOCIATION

- GENERAL NOTES
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.

TYPICAL P.C BRIDGE (L=20.0M)

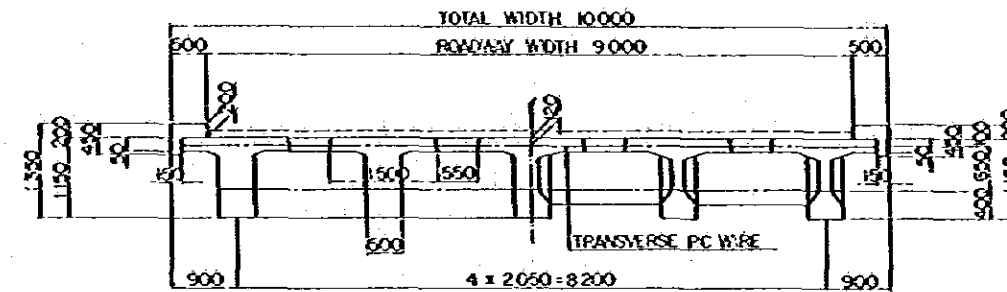
ELEVATION S=1:100



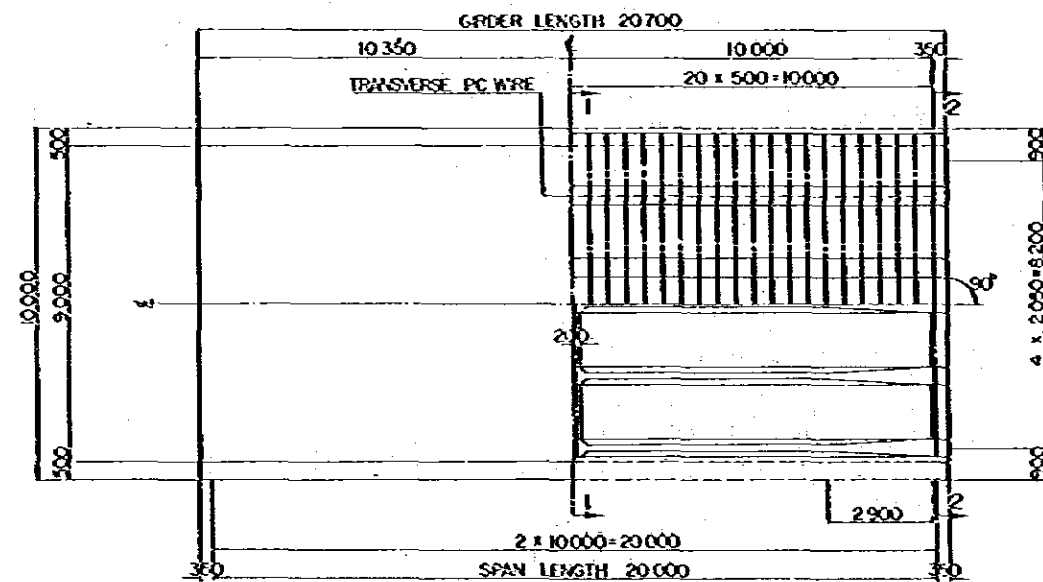
CROSS SECTION S=1:60

2-2

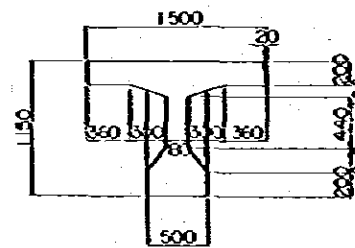
1-1



GENERAL PLAN S=1:100



GIRDER SECTION S=1:30



DESIGN CRITERIA

1. JRA STANDARD SPECIFICATION FOR HIGHWAY BRIDGES 1979 EDITIONS
2. CONCRETE MINIMUM COMPRESSIVE STRENGTH  
 SUPER STRUCTURE 350<sup>kg/cm<sup>2</sup></sup> AT 28 DAYS  
 SUB STRUCTURE 210<sup>kg/cm<sup>2</sup></sup> AT 28 DAYS
3. PRESTRESSING TENDON TO HAVE A YIELD POINT STRESS OF  
 $F_y = 8000^{kg/cm^2}$  ( $F_y = 13500^{kg/cm^2}$ )
4. ALL REINFORCING BAR TO HAVE A YIELD POINT STRESS OF  
 $F_y = 3000^{kg/cm^2}$
5. LIVE LOAD TL-20

\* JRA; JAPAN ROAD ASSOCIATION

GENERAL NOTES

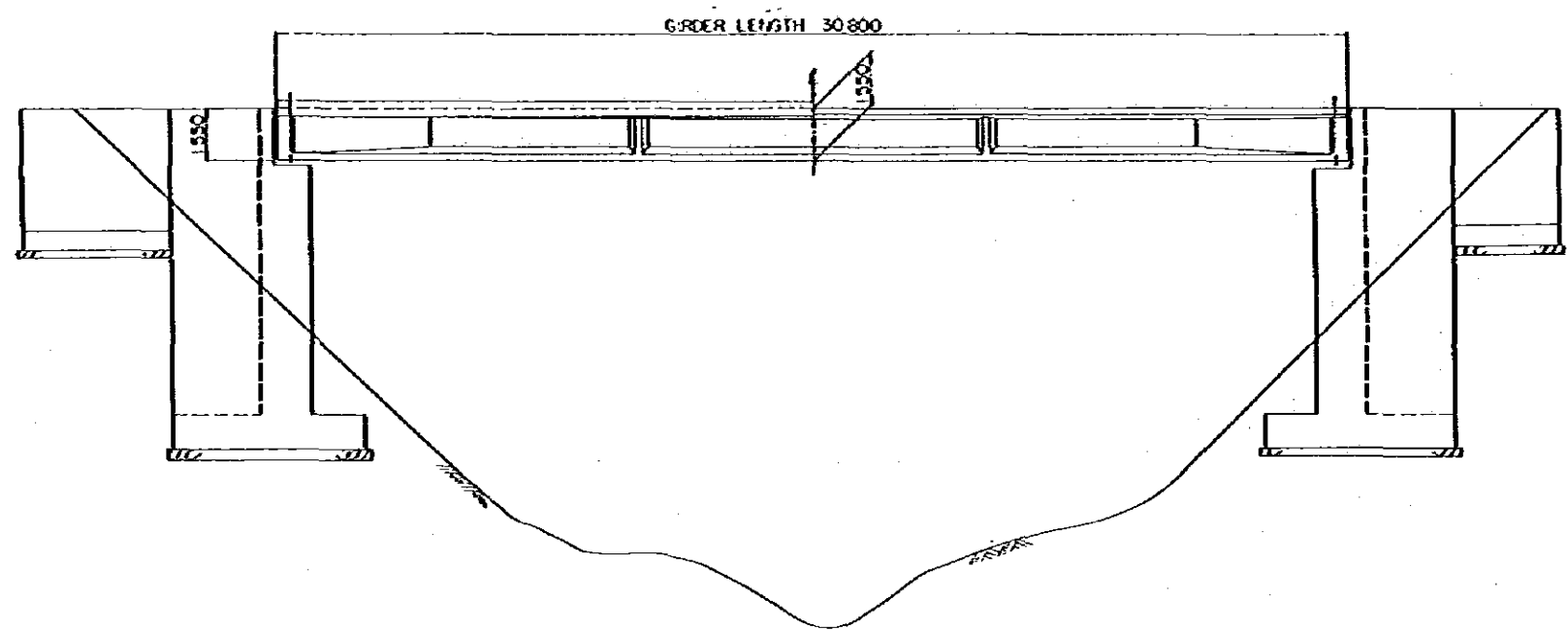
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.

REDUCED PLAN

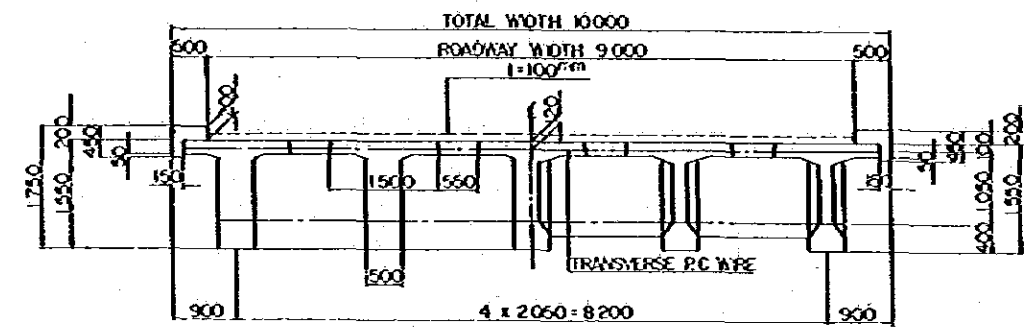
SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY. SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE.

### TYPICAL P.C BRIDGE (L=30.0M)

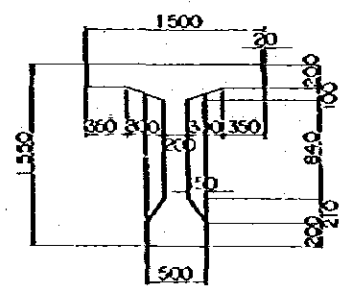
ELEVATION S=1:100



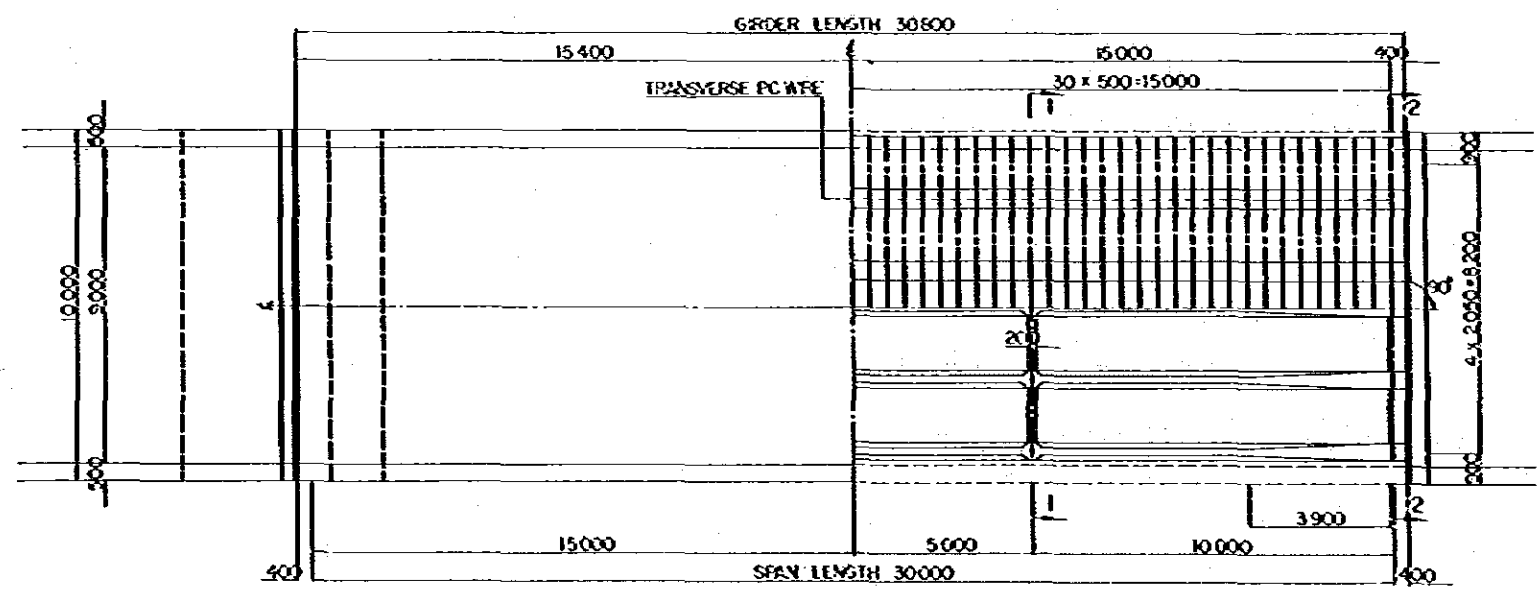
CROSS SECTION S=1:50



GIRDER SECTION S=1:30



GENERAL PLAN S=1:100



**DESIGN CRITERIA**

1. JRA STANDARD SPECIFICATION FOR HIGHWAY BRIDGES 1979 EDITIONS.
  2. CONCRETE MINIMUM COMPRESSIVE STRENGTH  
 SUPER STRUCTURE 350<sup>kg/cm<sup>2</sup></sup> AT 28 DAYS  
 SUB STRUCTURE 210<sup>kg/cm<sup>2</sup></sup> AT 28 DAYS
  3. PRESTRESSING TENDON TO HAVE A YIELD POINT STRESS OF  
 $F_y = 8000^{kg/cm^2}$  ( $F_y = 13500^{kg/cm^2}$ )
  4. ALL REINFORCING BAR TO HAVE A YIELD POINT STRESS OF  
 $F_y = 3000^{kg/cm^2}$
  5. LIVE LOAD TL-20
- \* JRA; JAPAN ROAD ASSOCIATION

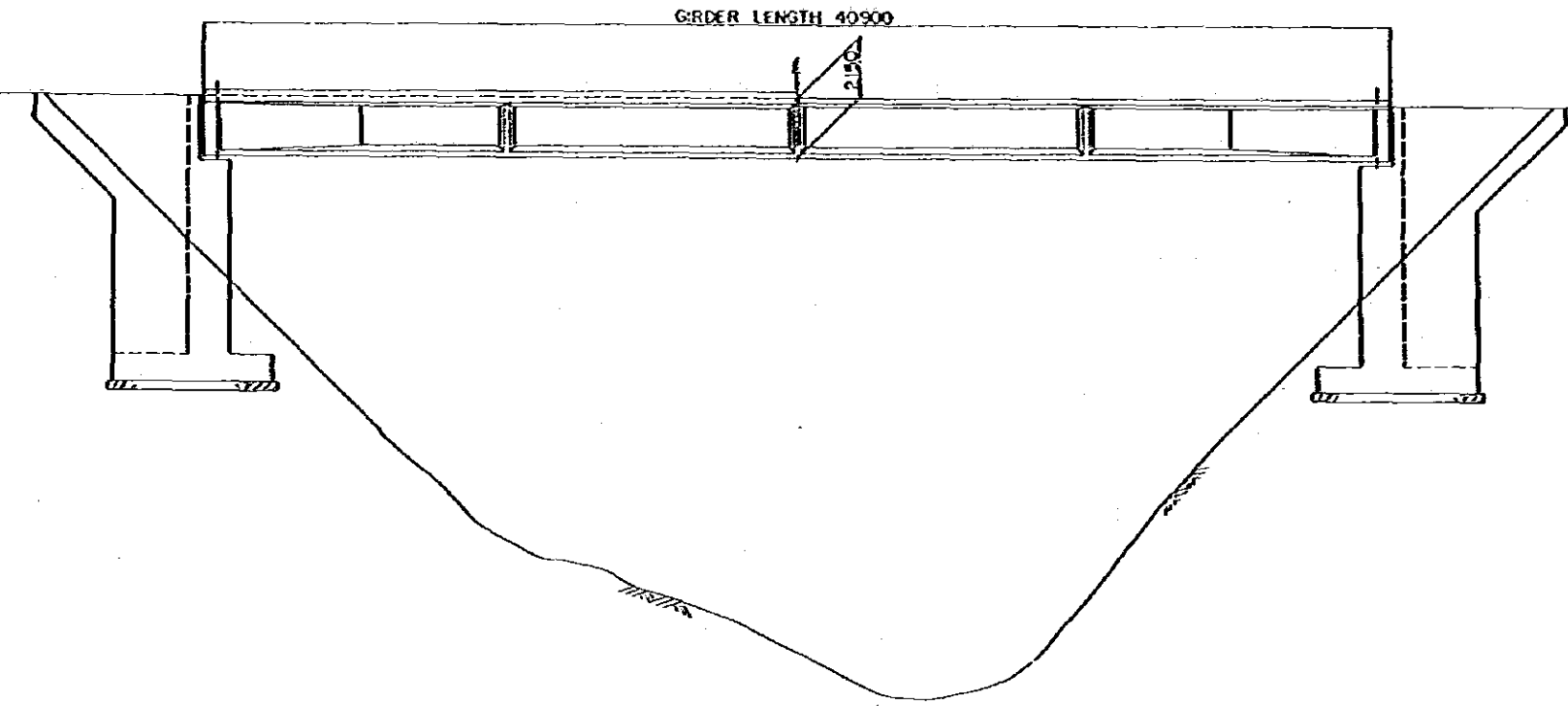
**GENERAL NOTES**

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.

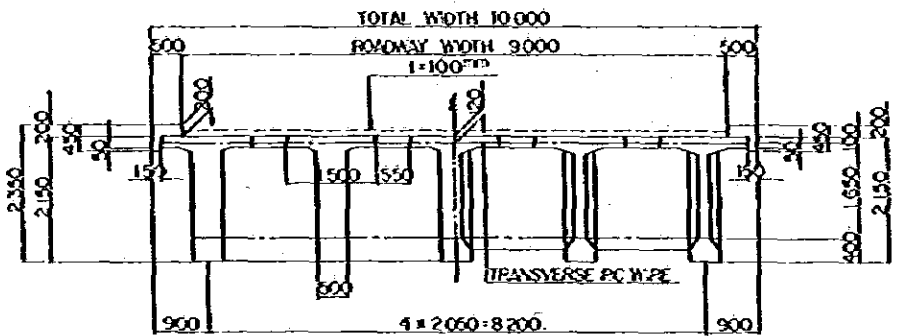
**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

TYPICAL P.C BRIDGE (L=40.0M)

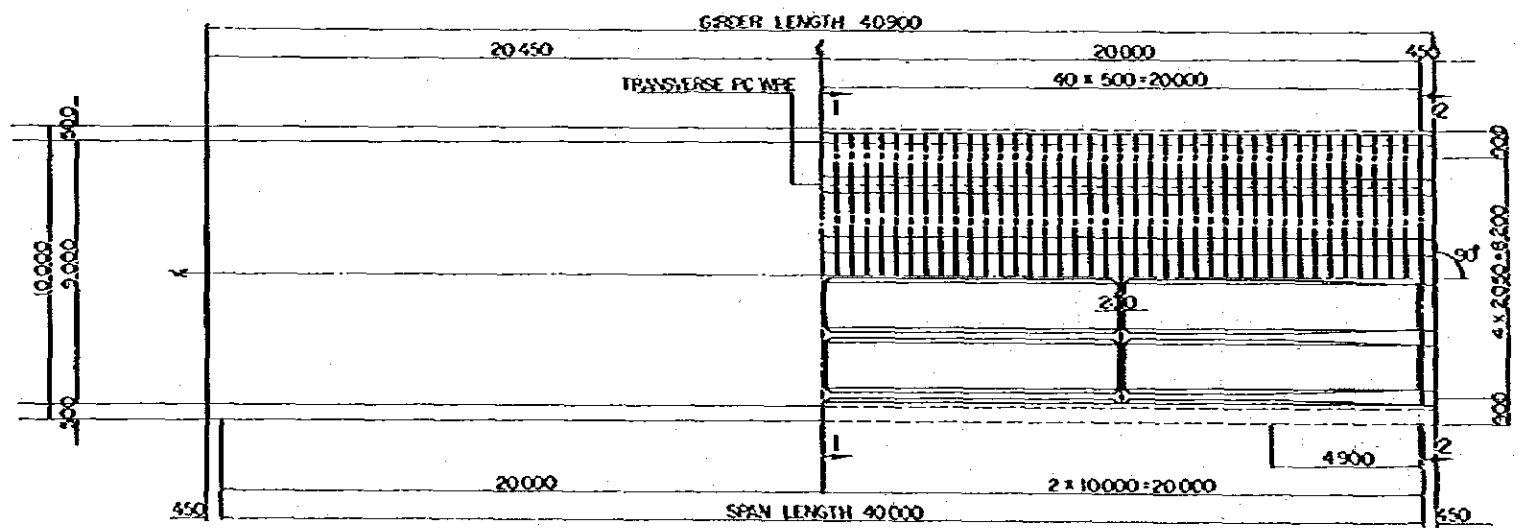
ELEVATION S=1:120



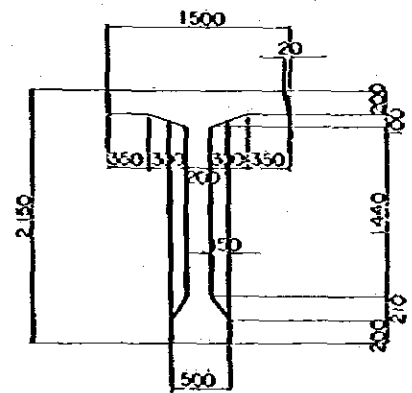
CROSS SECTION S=1:60



GENERAL PLAN S=1:120



GIRDER SECTION S=1:30



DESIGN CRITERIA

1. JRA STANDARD SPECIFICATION FOR HIGHWAY BRIDGES 1979 EDITIONS.
2. CONCRETE MINIMUM COMPRESSIVE STRENGTH  
 SUPER STRUCTURE  $350^{kg/cm^2}$  AT 28 DAYS  
 SUB STRUCTURE  $210^{kg/cm^2}$  AT 28 DAYS
3. PRESTRESSING TENDON TO HAVE A YIELD POINT STRESS OF  $F_y = 8000^{kg/cm^2}$  ( $F_y = 13500^{kg/cm^2}$ )
4. ALL REINFORCING BAR TO HAVE A YIELD POINT STRESS OF  $F_y = 3000^{kg/cm^2}$
5. LIVE LOAD TL-20

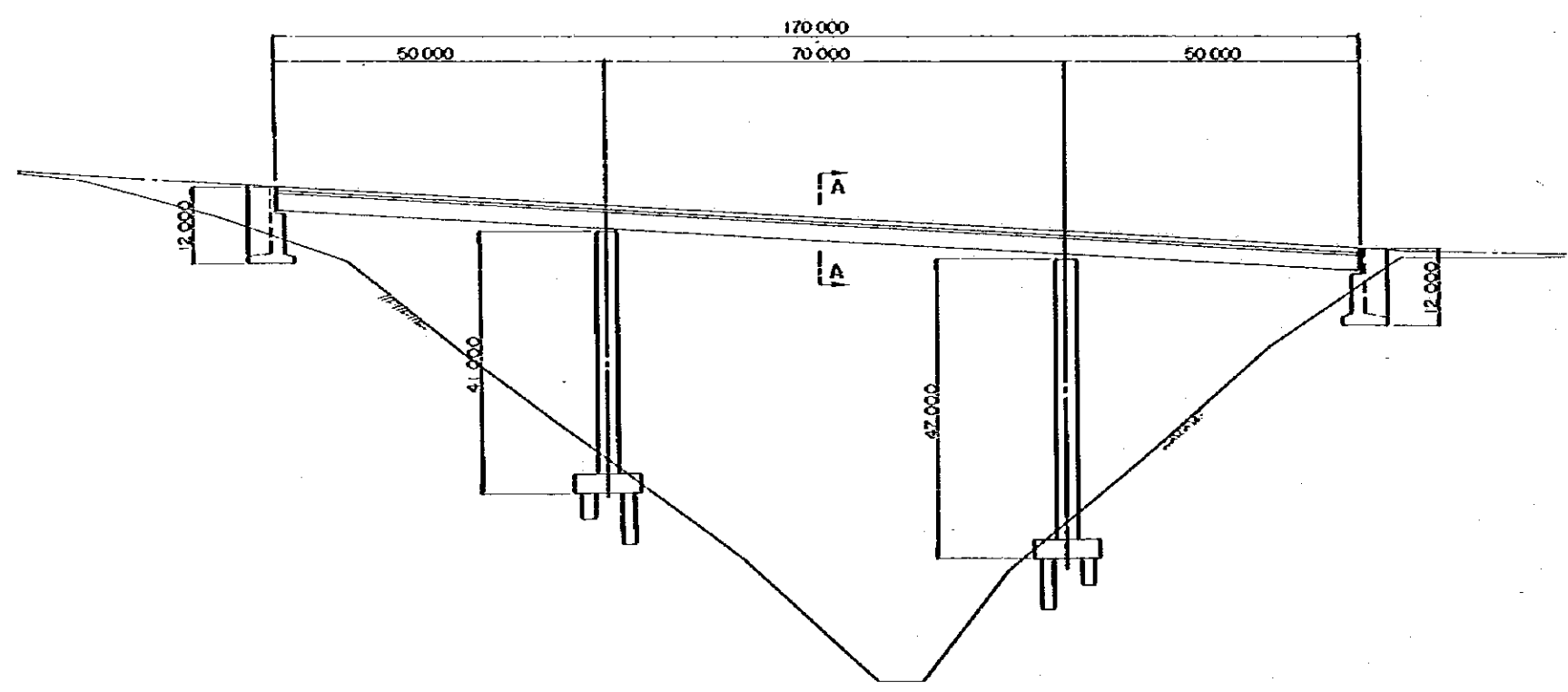
\* JRA: JAPAN ROAD ASSOCIATION

GENERAL NOTES

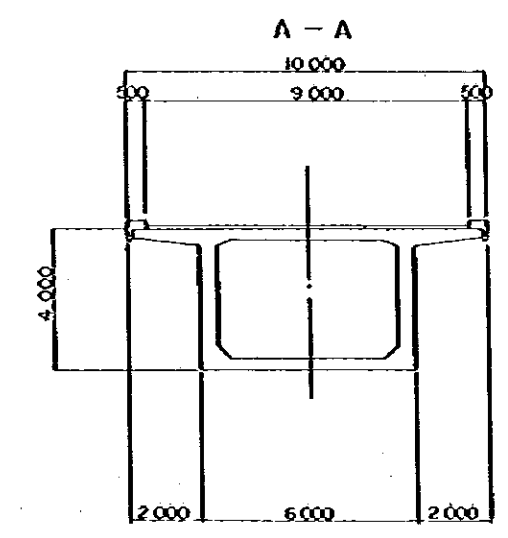
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.

**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

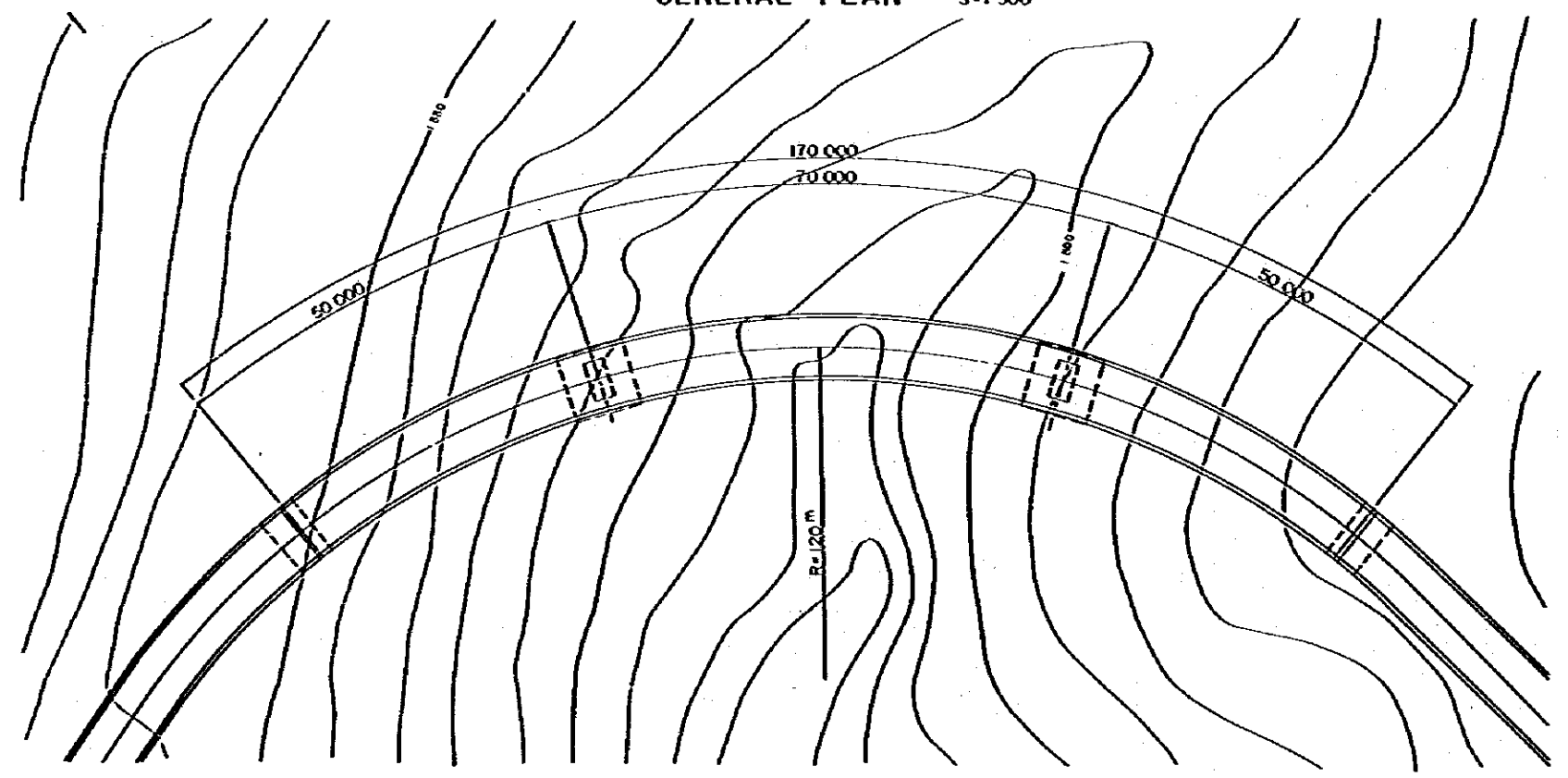
ELEVATION S=1:500



CROSS SECTION S=1:100



GENERAL PLAN S=1:500



DESIGN CRITERIA

1. JRA STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, 1979 EDITIONS.
2. CONCRETE MINIMUM COMPRESSIVE STRENGTH  
 SUPER STRUCTURE  $400^{kg/cm^2}$  AT 28 DAYS.  
 SUB STRUCTURE  $210^{kg/cm^2}$  AT 28 DAYS.
3. PRESTRESSING TENDON TO HAVE A YIELD POINT STRESS OF  $F_y = 8000^{kg/cm^2}$  ( $F_y = 13500^{kg/cm^2}$ )
4. ALL REINFORCING BAR TO HAVE A YIELD POINT STRESS OF  $F_y = 3000^{kg/cm^2}$
5. LIVE LOAD TL-20
6. PILES; CAST IN SITU ROPILE #20 M WITH A BEARING CAPACITY OF AT LEAST 500 TONS.

JRA; JAPAN ROAD ASSOCIATION

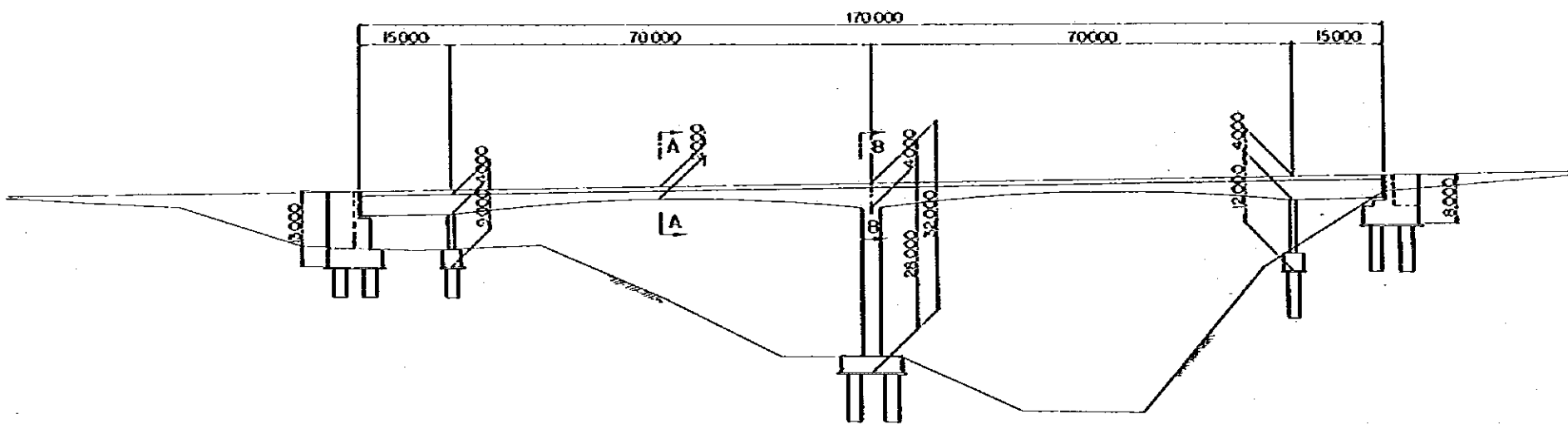
GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR LOCATION AND PROPOSED DESIGN INFORMATION SEE BRIDGE INVENTORY AND IMPROVEMENTS.
3. PROPOSED METHOD OF CONSTRUCTION FOR SUPER STRUCTURE IS THE INCREMENTAL LAUNCHING METHOD.

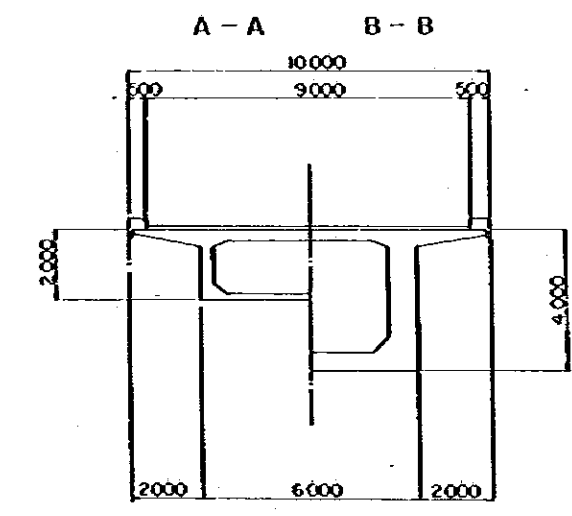
REDUCED PLAN  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE



ELEVATION S=1:500



CROSS SECTION S=1:100



DESIGN CRITERIA

1. JRA STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, 1979 EDITIONS.
2. CONCRETE MINIMUM COMPRESSIVE STRENGTH  
 SUPER STRUCTURE  $400^{kg/cm^2}$  AT 28 DAYS.  
 SUB STRUCTURE  $210^{kg/cm^2}$  AT 28 DAYS.
3. PRESTRESSING TENDON TO HAVE A YIELD POINT STRESS OF  $F_y = 8000^{kg/cm^2}$  ( $F_y = 13500^{kg/cm^2}$ )
4. ALL REINFORCING BAR TO HAVE A YIELD POINT STRESS OF  $F_y = 3000^{kg/cm^2}$
5. LIVE LOAD TL-20
6. PRECAST IN SITU RCPIE #20M WITH A BEARING CAPACITY OF AT LEAST 500 TONS.

JRA: JAPAN ROAD ASSOCIATION

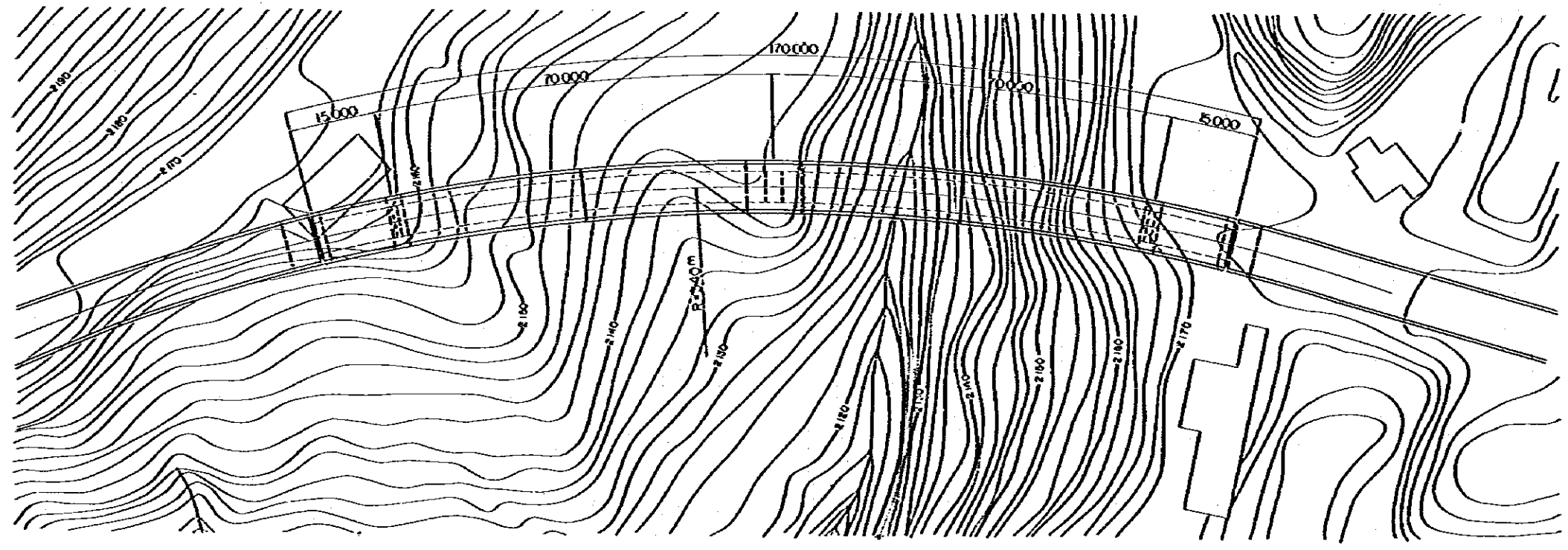
GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR LOCATION AND PROPOSED DESIGN INFORMATION SEE BRIDGE INVENTORY AND IMPROVEMENTS.
3. PROPOSED METHOD OF CONSTRUCTION FOR SUPER STRUCTURE IS THE CANTILEVER METHOD.

**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY. SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE.

DL-2100

GENERAL PLAN S=1:500



M O P T

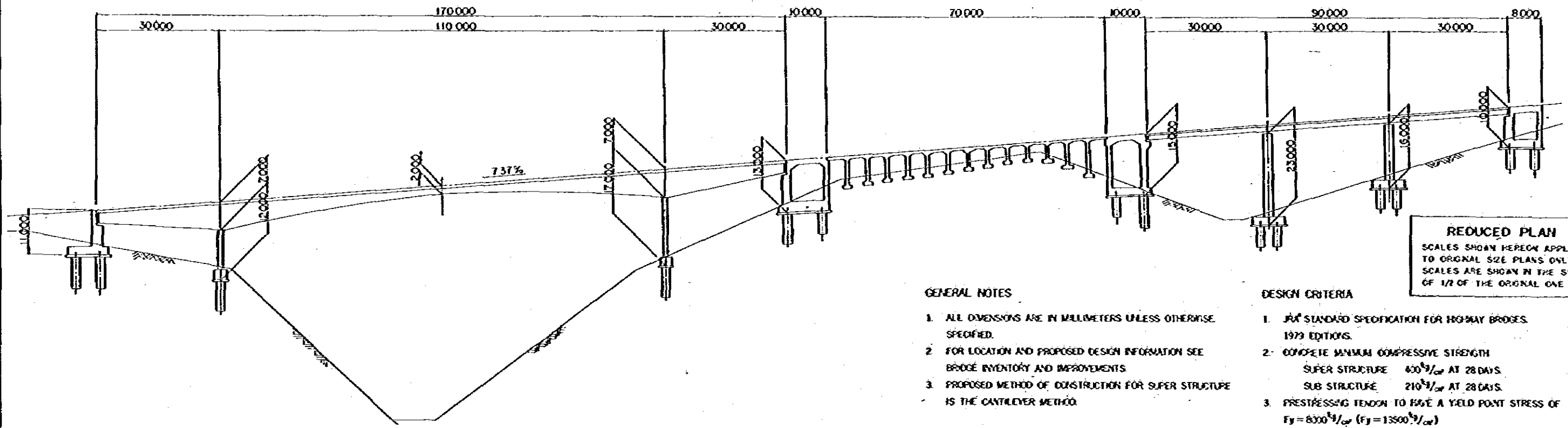
BOGOTA — BUENAVENTURA  
 ROAD PROJECT

BRIDGE AND STRUCTURE  
 Q. LOSMARIAS BRIDGE (K97+500)

SCALE 1:100 , 1:500

DATE MARCH 1982  
 SHEET No. 123 OF 135

ELEVATION S=1:500



**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
 SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR LOCATION AND PROPOSED DESIGN INFORMATION SEE BRIDGE INVENTORY AND IMPROVEMENTS
3. PROPOSED METHOD OF CONSTRUCTION FOR SUPER STRUCTURE IS THE CANTILEVER METHOD.

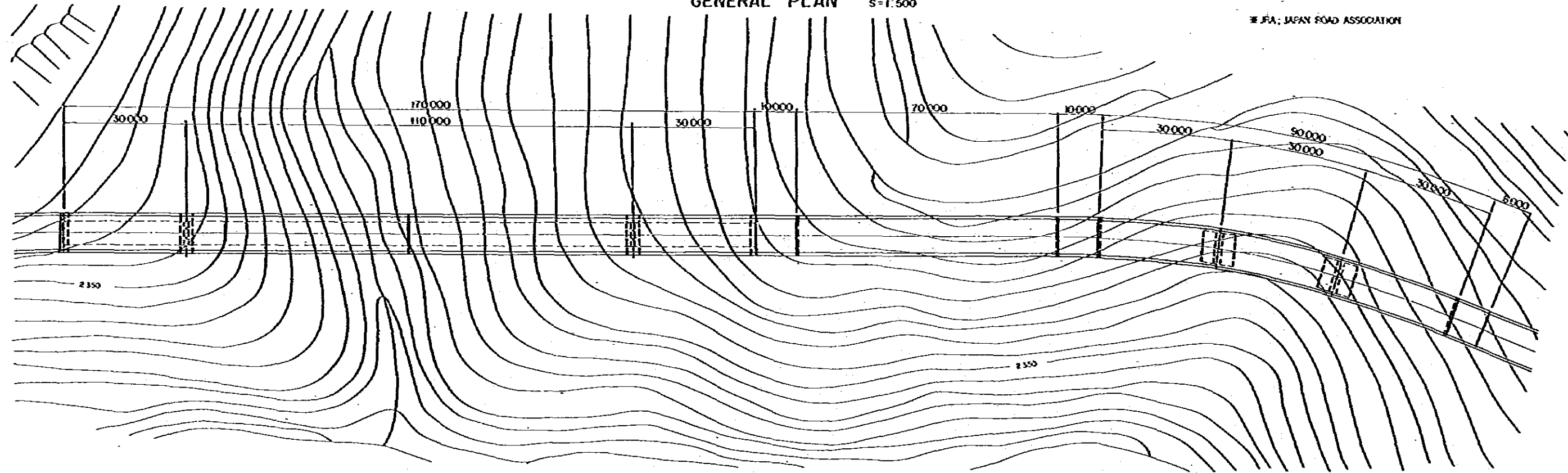
DESIGN CRITERIA

1. JRA STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, 1973 EDITIONS.
2. CONCRETE MINIMUM COMPRESSIVE STRENGTH  
 SUPER STRUCTURE 430<sup>kg/cm<sup>2</sup></sup> AT 28 DAYS.  
 SUB STRUCTURE 210<sup>kg/cm<sup>2</sup></sup> AT 28 DAYS.
3. PRESTRESSING TENDON TO HAVE A YIELD POINT STRESS OF  $F_y = 8000^{kg/cm^2}$  ( $F_y = 13500^{kg/cm^2}$ )
4. ALL REINFORCING BAR TO HAVE A YIELD POINT STRESS OF  $F_y = 3000^{kg/cm^2}$
5. LIVE LOAD TL-20
6. PRE-CAST IN SITU ROPILE #20M WITH A BEARING CAPACITY OF AT LEAST 500 TONS

\* JRA, JAPAN ROAD ASSOCIATION

DL=2320

GENERAL PLAN S=1:500



M O P T

BOGOTA — BUENAVENTURA  
 ROAD PROJECT

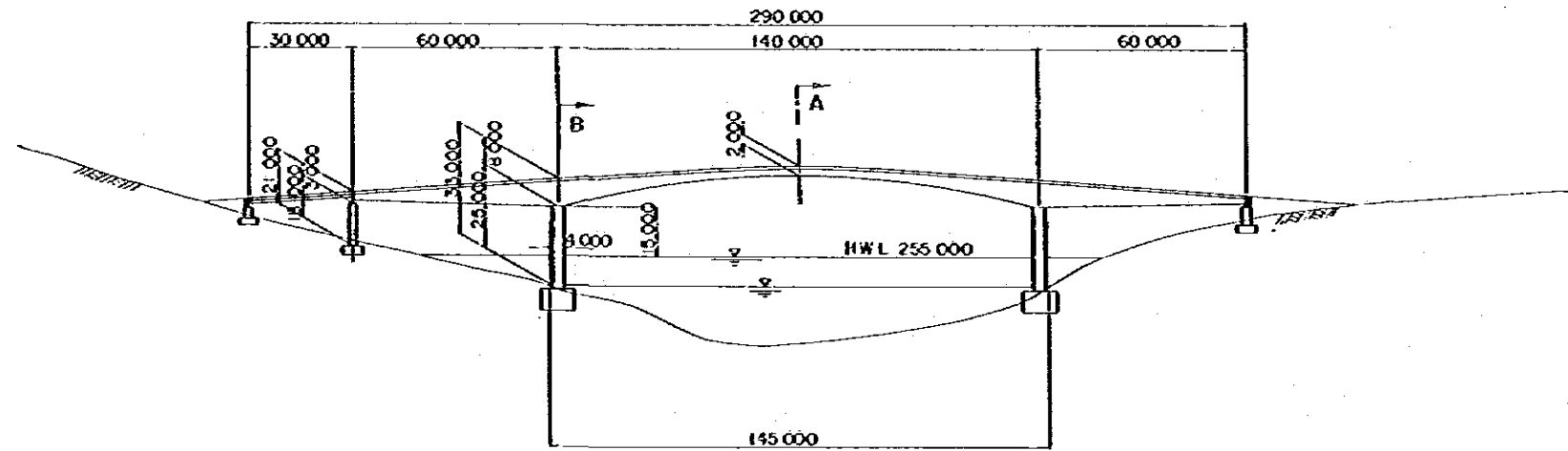
BRIDGE AND STRUCTURE  
 Q. PERALIS BRIDGE (KI01+200)

SCALE 1:500

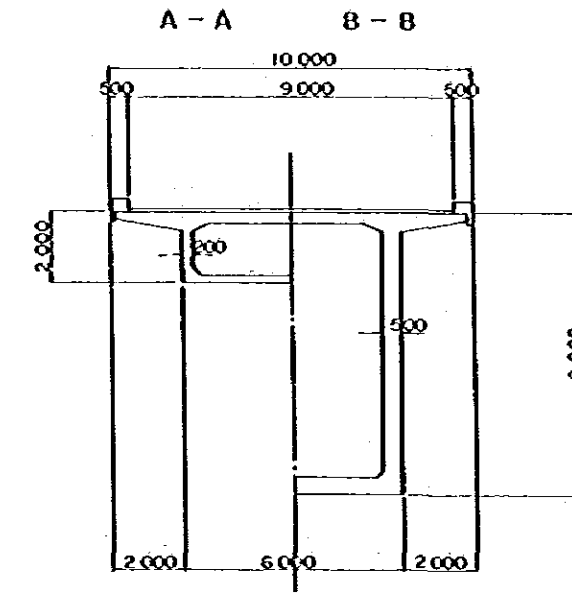
DATE MARCH 1982

SHEET No. 124 OF 135

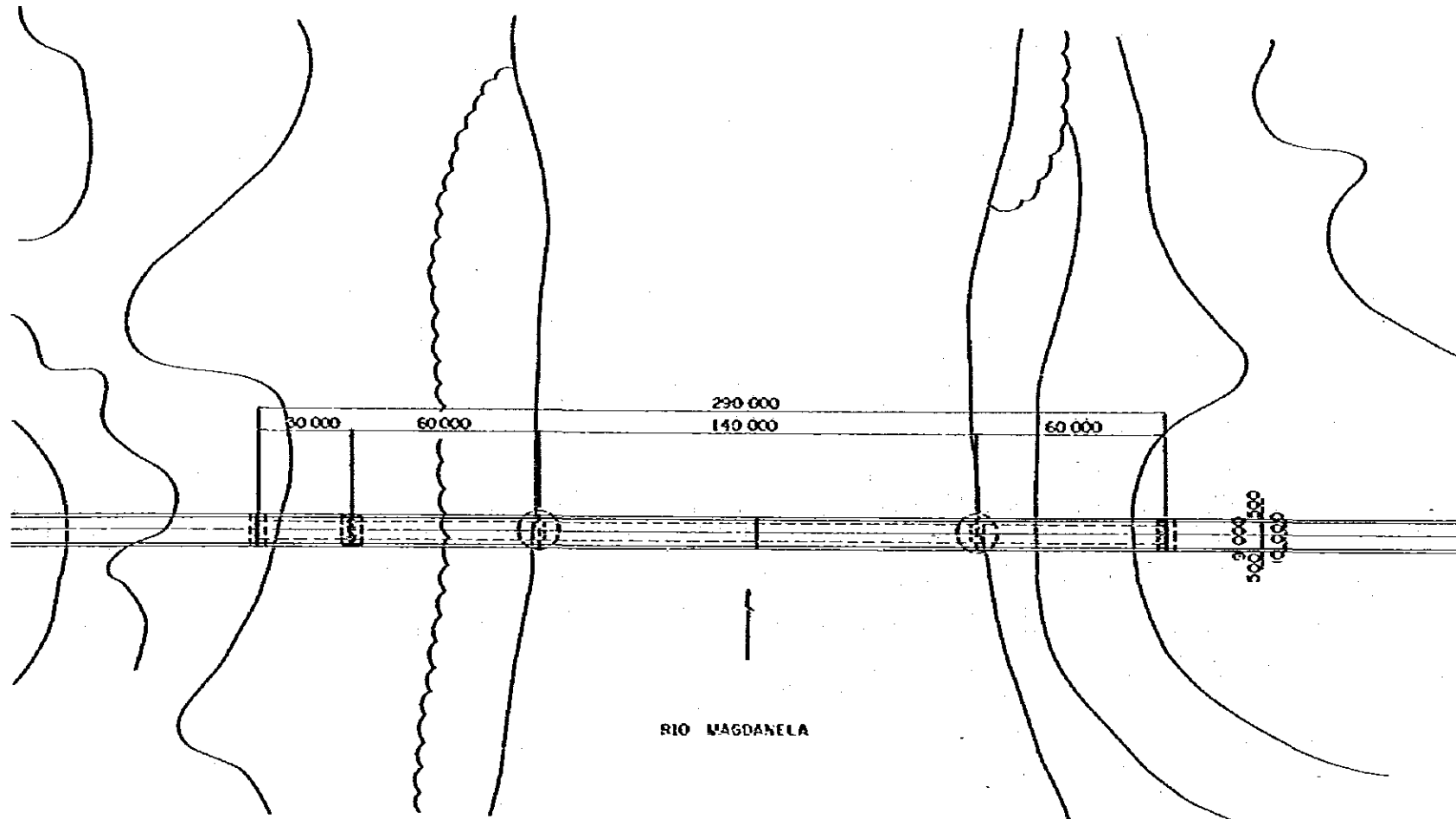
ELEVATION S=1:1000



CROSS SECTION S=1:200



GENERAL PLAN S=1:1000



DESIGN CRITERIA

1. JRA STANDARD SPECIFICATION FOR HIGHWAY BRIDGES 1979 EDITIONS.
2. CONCRETE MINIMUM COMPRESSIVE STRENGTH  
SUPER STRUCTURE 400<sup>kg/cm<sup>2</sup></sup> AT 28 DAYS.  
SUB STRUCTURE 210<sup>kg/cm<sup>2</sup></sup> AT 28 DAYS.
3. PRESTRESSING TENDON TO HAVE A YIELD POINT STRESS OF  $F_y = 8000^{kg/cm^2}$  ( $F_y = 13500^{kg/cm^2}$ )
4. ALL REINFORCING BAR TO HAVE A YIELD POINT STRESS OF  $F_y = 3000^{kg/cm^2}$
5. LIVE LOAD TL-20

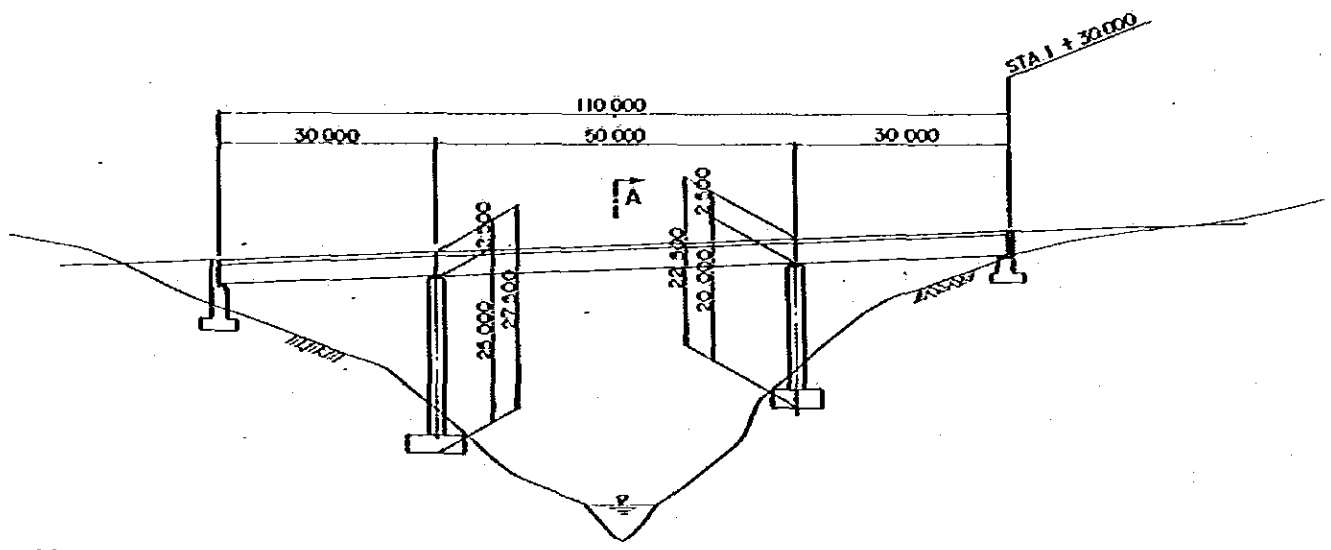
JRA; JAPAN ROAD ASSOCIATION

GENERAL NOTES

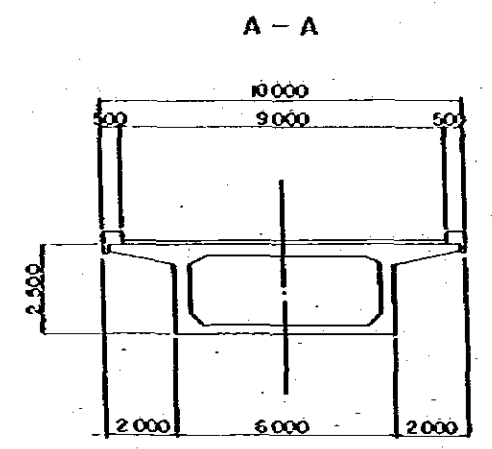
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR LOCATION AND PROPOSED DESIGN INFORMATION SEE BRIDGE INVENTORY AND IMPROVEMENTS.
3. PROPOSED METHOD OF CONSTRUCTION FOR SUPER STRUCTURE IS THE CASTLEVER METHOD.
4. FREE BOARD: 15.00M FROM HIGH WATER LEVEL.

REDUCED PLAN  
SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY  
SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL ONE

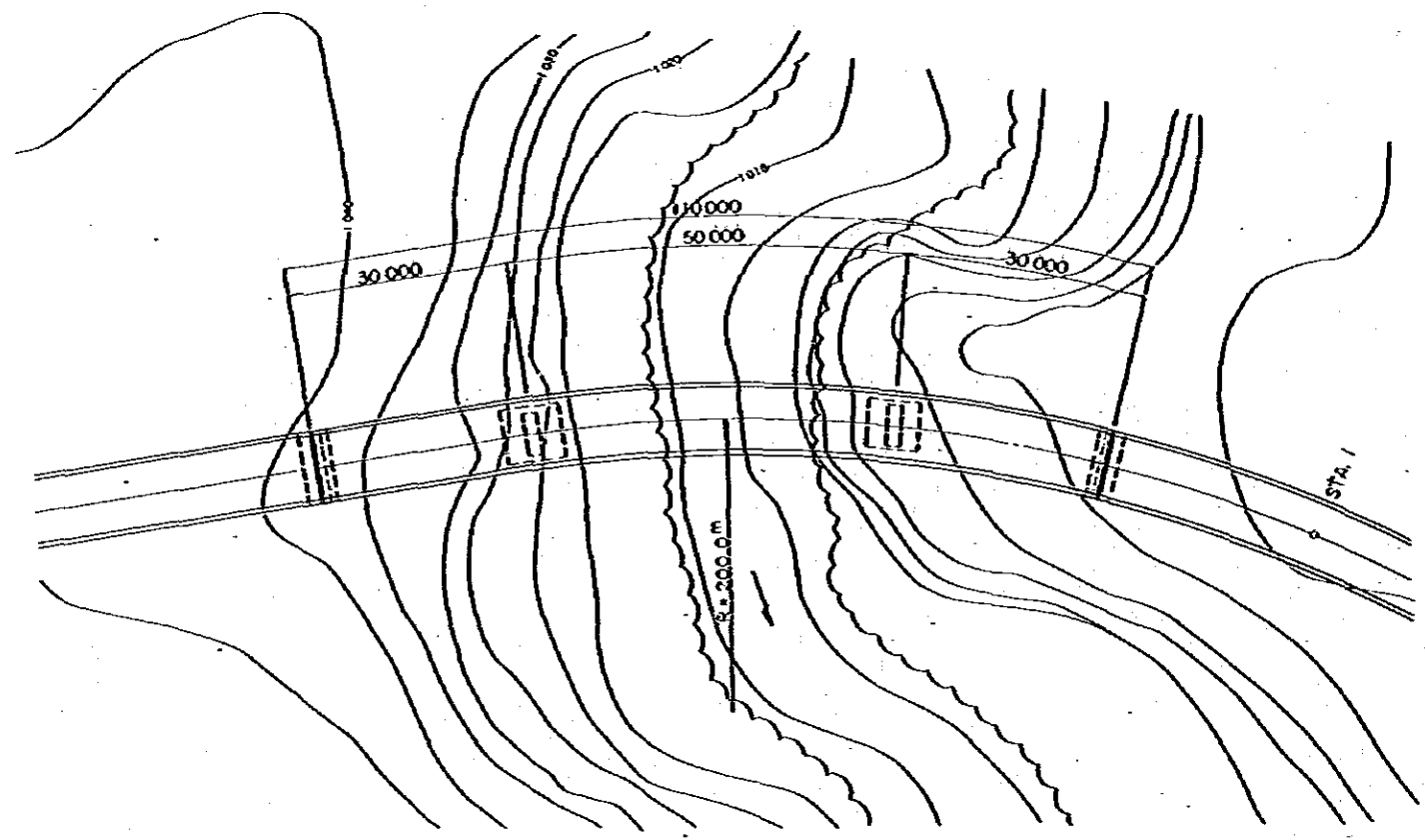
ELEVATION S=1:500



CROSS SECTION S=1:200



GENERAL PLAN S=1:500



DESIGN CRITERIA

1. JRA STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, 1979 EDITIONS.
2. CONCRETE MINIMUM COMPRESSIVE STRENGTH  
 SUPER STRUCTURE:  $400^{kg/cm^2}$  AT 28 DAYS  
 SUB STRUCTURE:  $210^{kg/cm^2}$  AT 28 DAYS
3. PRESTRESSING TENDON TO HAVE A YIELD POINT STRESS OF  $F_y = 8000^{kg/cm^2}$  ( $F_y = 13500^{kg/cm^2}$ )
4. ALL REINFORCING BAR TO HAVE A YIELD POINT STRESS OF  $F_y = 3000^{kg/cm^2}$
5. LIVE LOAD TL-20  
 \* JRA: JAPAN ROAD ASSOCIATION

**REDUCED PLAN**  
 SCALES SHOWN HEREON APPLY TO ORIGINAL SIZE PLANS ONLY. SCALES ARE SHOWN IN THE SIZE OF 1/2 OF THE ORIGINAL CASE.

GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. FOR LOCATION AND PROPOSED DESIGN INFORMATION SEE BRIDGE INVENTORY AND IMPROVEMENTS.
3. PROPOSED METHOD OF CONSTRUCTION FOR SUPER STRUCTURE IS THE INCREMENTAL LAUNCHING METHOD.

REMARKS

1. THIS BRIDGE TYPE IS APPLIED FOR RIO SUMAPAZ BRIDGE OF GIRARDOT BYPASS.

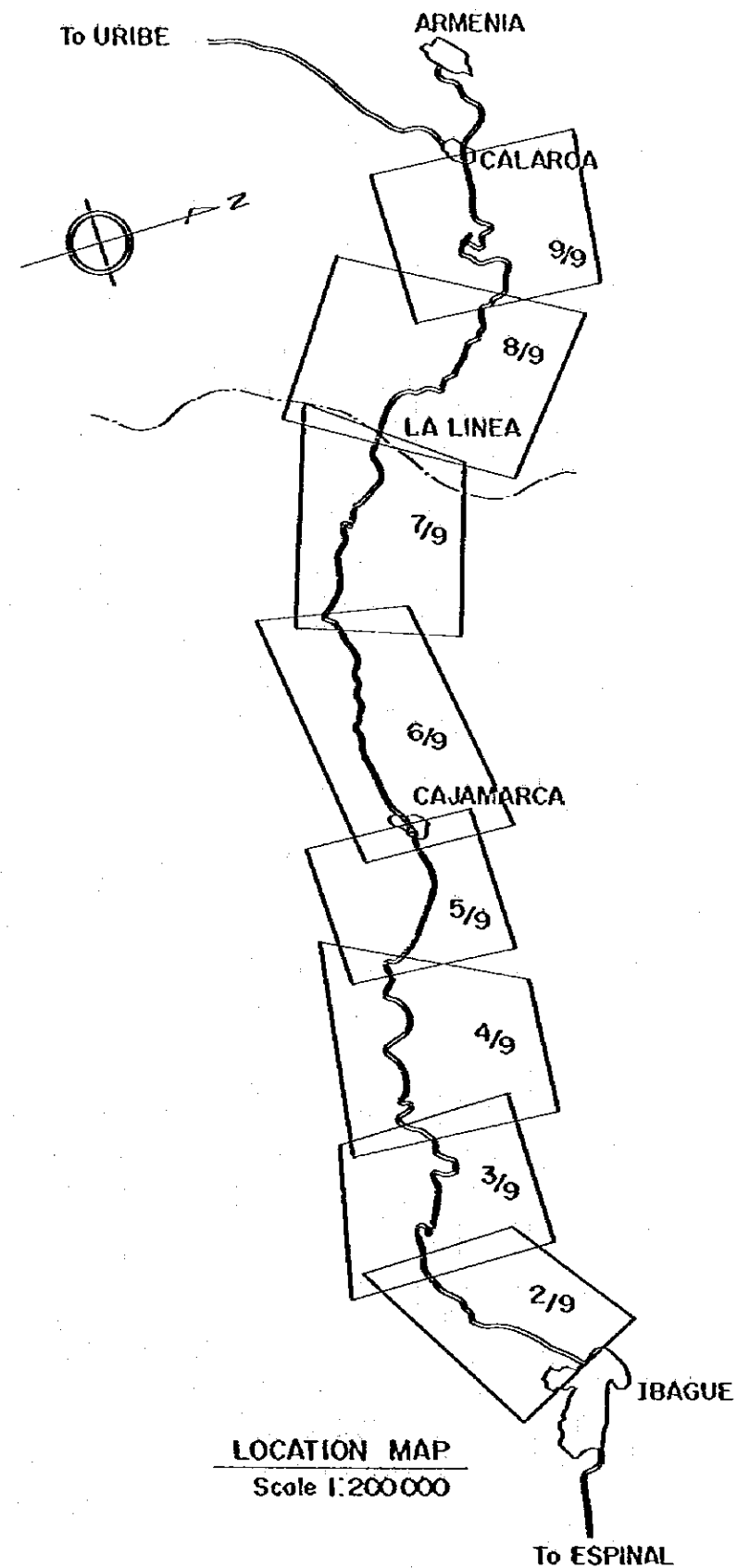
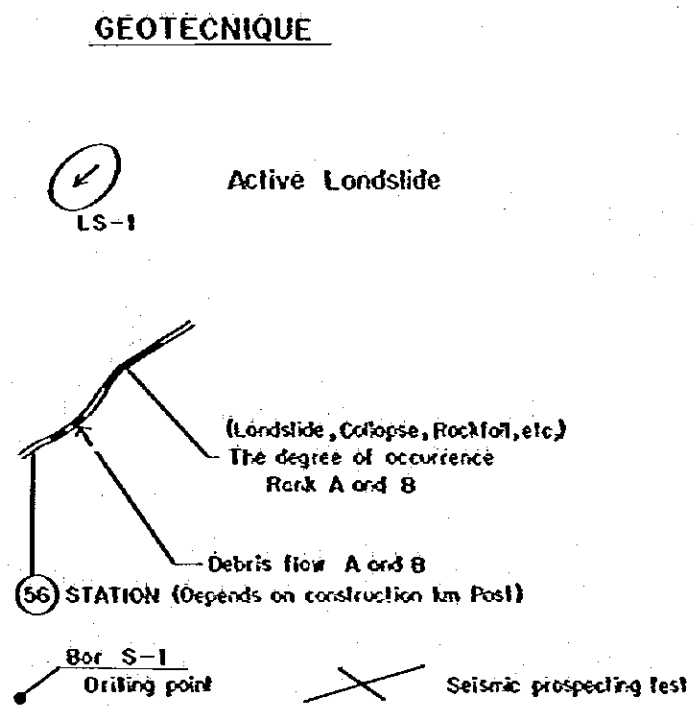
M O P T	BOGOTA — BUENAVENTURA ROAD PROJECT	BRIDGE AND STRUCTURE RIO COMBEIMA BRIDGE (IBAGUE BYPASS)	SCALE 1:200, 1:500	DATE MARCH 1982 SHEET No. 126 OF 135
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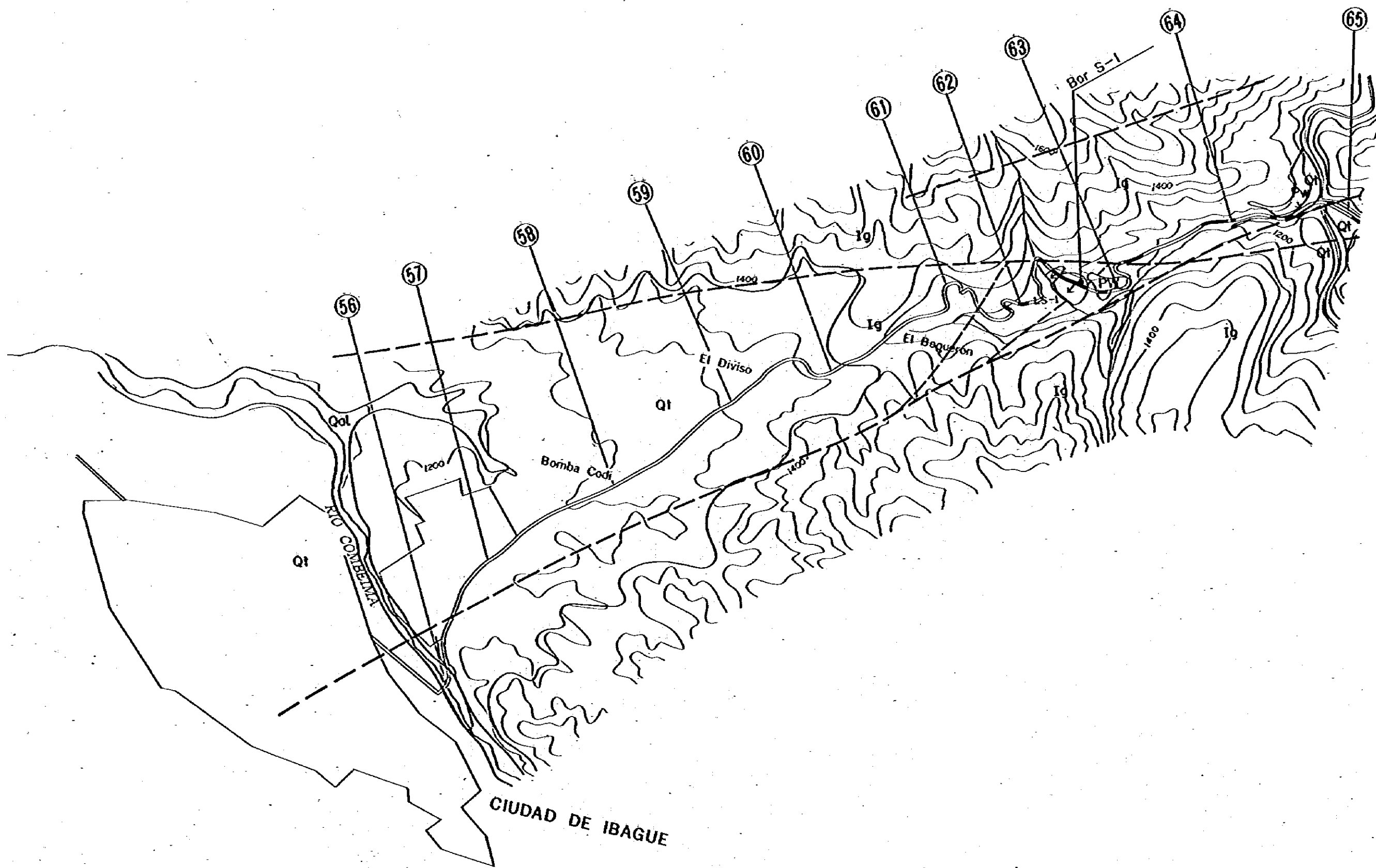
#### 4. GEOLOGIC AND GEOTECNIC MAP

LOCATION MAP	127
(1) KM 56 + 000 - KM 65 + 000	128
(2) KM 65 + 000 - KM 73 + 000	129
(3) KM 73 + 000 - KM 83 + 000	130
(4) KM 83 + 000 - KM 90 + 500	131
(5) KM 90 + 500 - KM 101 + 000	132
(6) KM 101 + 000 - KM 114 + 000	133
(7) KM 114 + 000 - KM 125 + 000	134
(8) KM 125 + 000 - KM 135 + 600	135

# GEOLOGIC AND GEOTECNIC MAP

		GEOLOGY		LEGEND	
Cenozoic Quaternary	Qol	Alluvium	} Volcanic ash		Fault
	QI	Terrace (Gravel)			Fracture
	Pl	Pumice fall deposits			Syncline
	Pw	Pumice flow deposits			Anticline
					Geologic boundary
Mesozoic Jurassic & Triassic	Ig	Granodiorite and Quartzdiorite			
	Por	Porphyrite			
Palaeozoic	Db	Meto - Diabase			
	Im	Crystalline limestone			
	Ev	Green schist			
	Em	Black schist			
	Aml	Green, Black and Hornblend schist			





M O P T

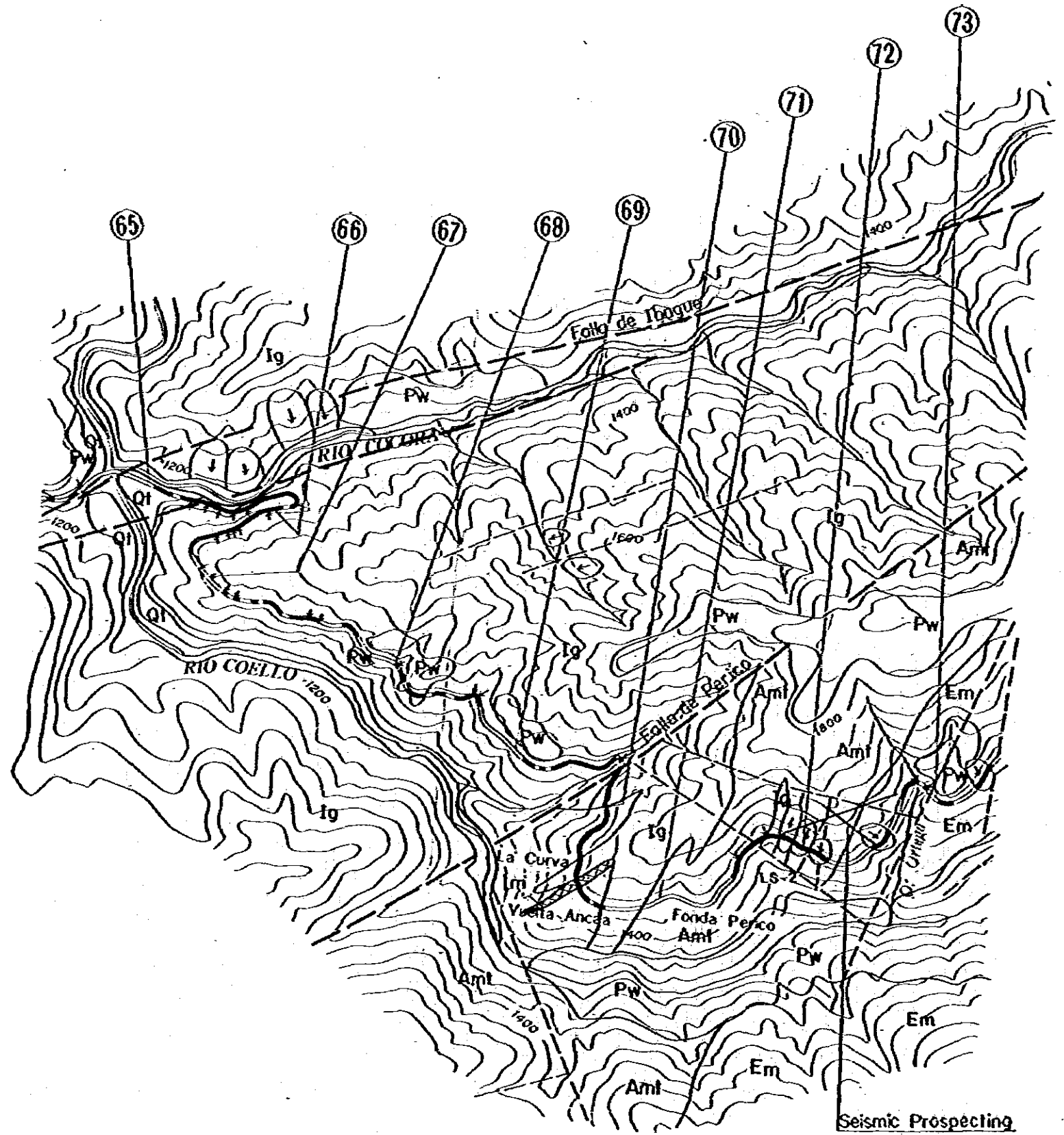
BÓGOTA — BUENAVENTURA  
ROAD PROJECT

GÉOLOGIC AND GEOTECNIC MAP (I)  
km 56+000 — km 65+000

SCALE 1:25 000

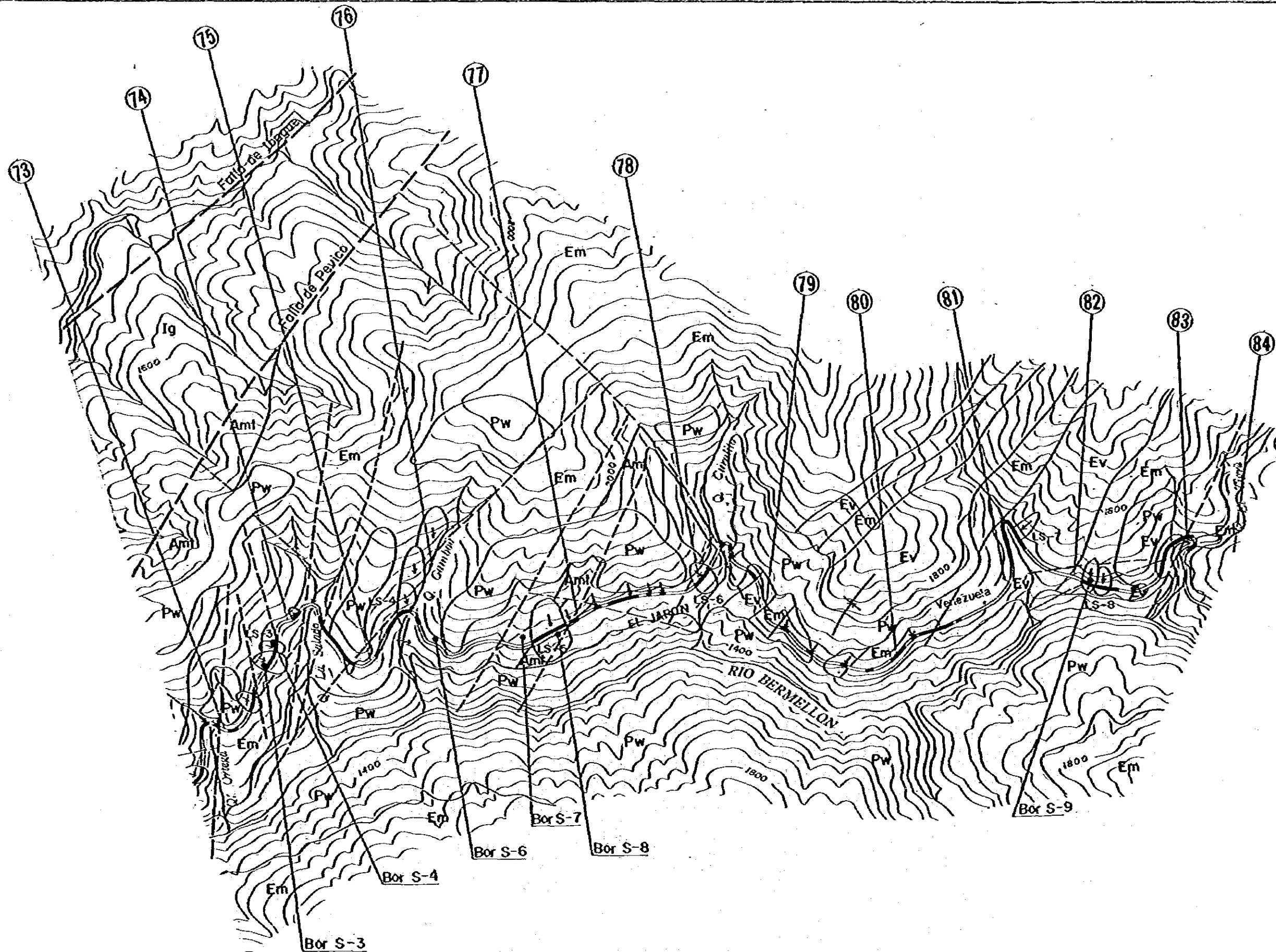
DATE MARCH 1982

SHEET No. 128 OF 135



M O P T	BOGOTA — BUENAVENTURA ROAD PROJECT	GEOLOGIC AND GEOTECHNIC MAP (2) km 65+000 - km 73+000	SCALE 1:25 000	DATE MARCH 1982 SHEET No. 129 OF 135
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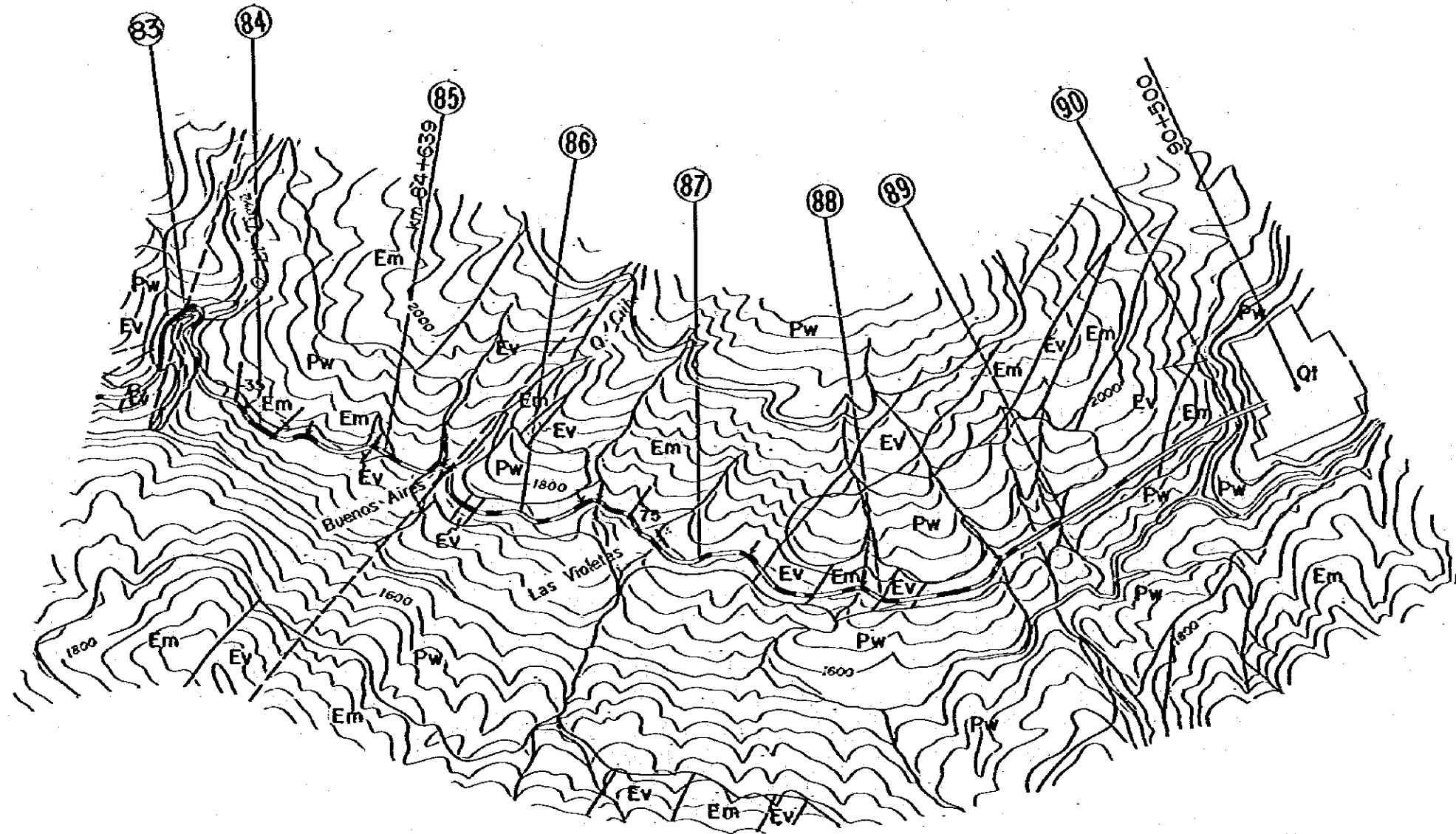
M O P T

BOGÓTA — BUENAVENTURA  
ROAD PROJECT

GEOLOGIC AND GEOTECHNIC MAP (3)  
km 73+000 — km 83+000

SCALE 1:25 000

DATE MARCH 1982  
SHEET No. 130 OF 135



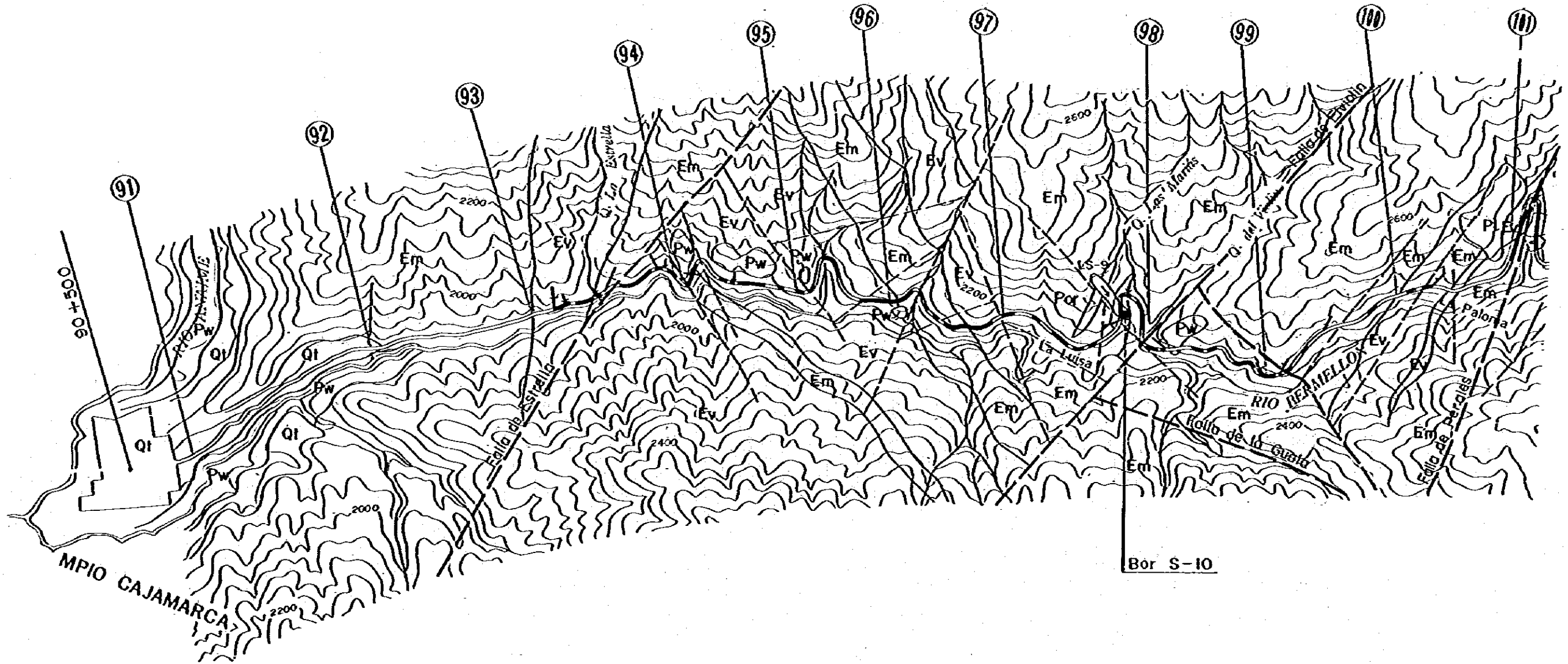
M O P T

BOGOTÁ — BUENAVENTURA  
ROAD PROJECT

GEOLOGIC AND GEOTECHNIC MAP (4)  
km 83+000 — km 90+500

SCALE 1:25 000

DATE MARCH 1982  
SHEET No. 131 OF 135



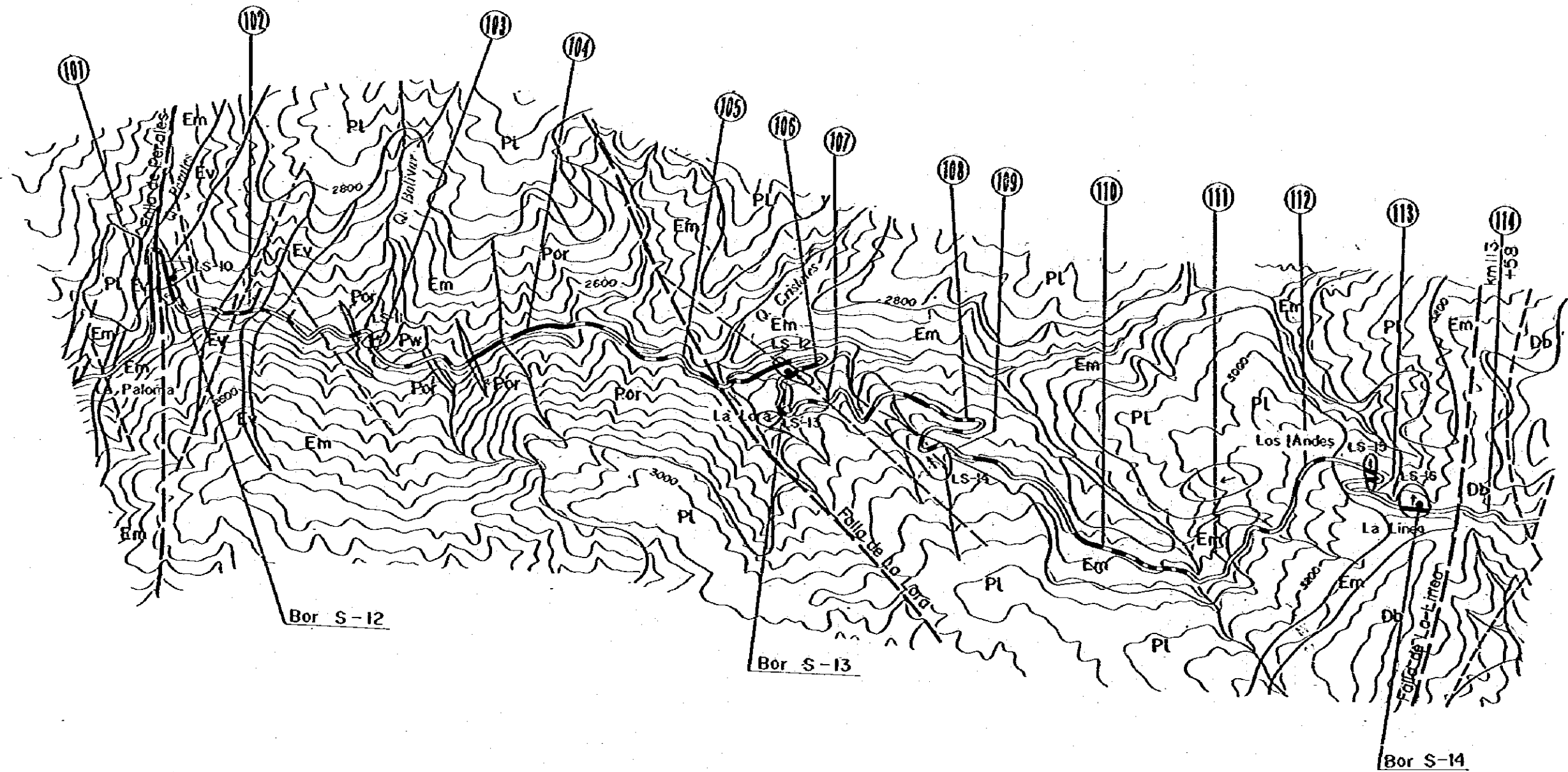
M O P T

BOGOTA — BUENAVENTURA  
ROAD PROJECT

GEOLOGIC AND GEOTECNIC MAP (5)  
km 90+500 - km 101+000

SCALE 1:25 000

DATE MARCH 1982  
SHEET No. 132 OF 135



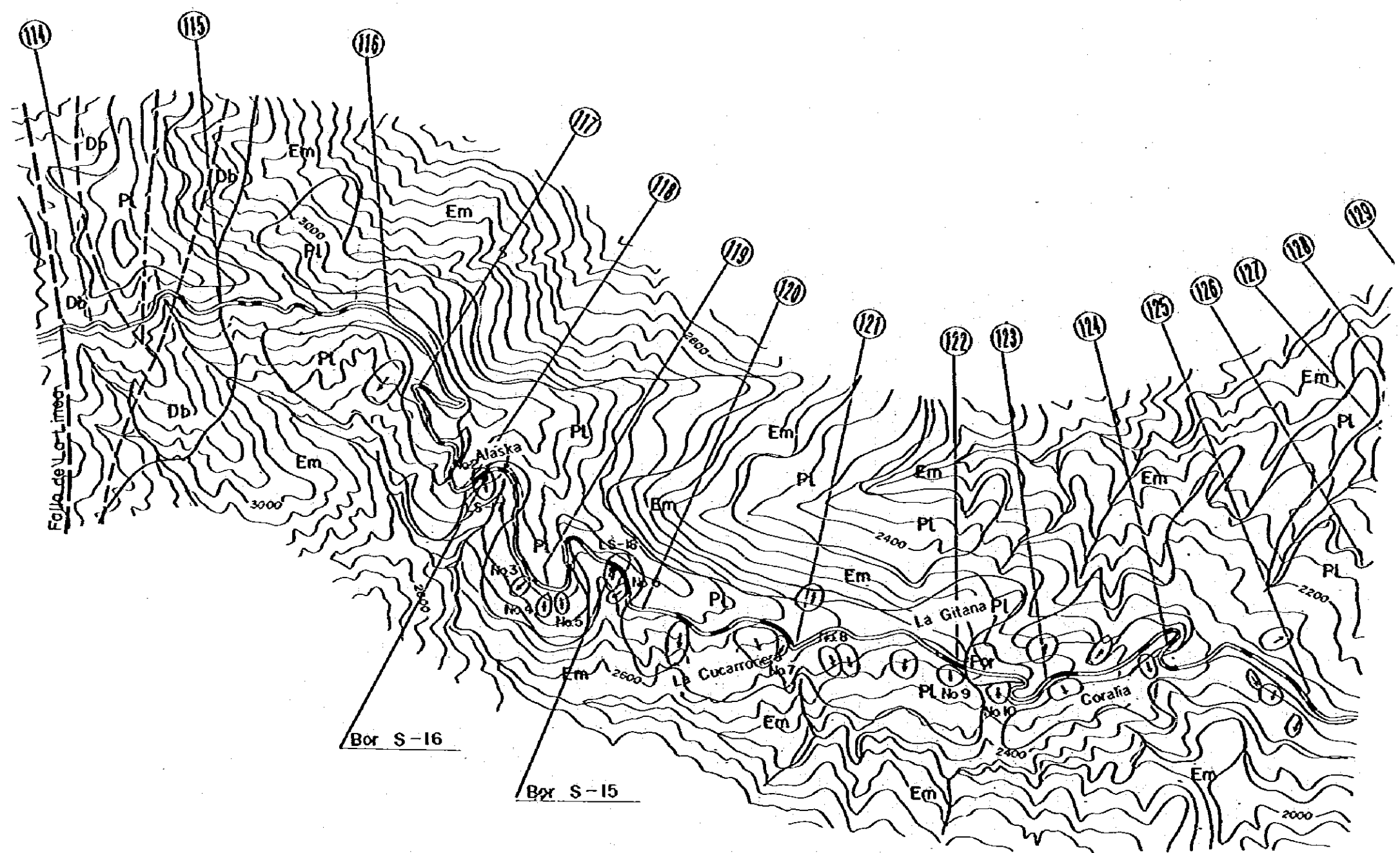
M O P T

BOGOTA — BUENAVENTURA  
ROAD PROJECT

GEOLOGIC AND GEOTECHNIC MAP (6)  
km 101+000 — km 114+000

SCALE 1:25 000

DATE MARCH 1982  
SHEET No. 133 OF 135



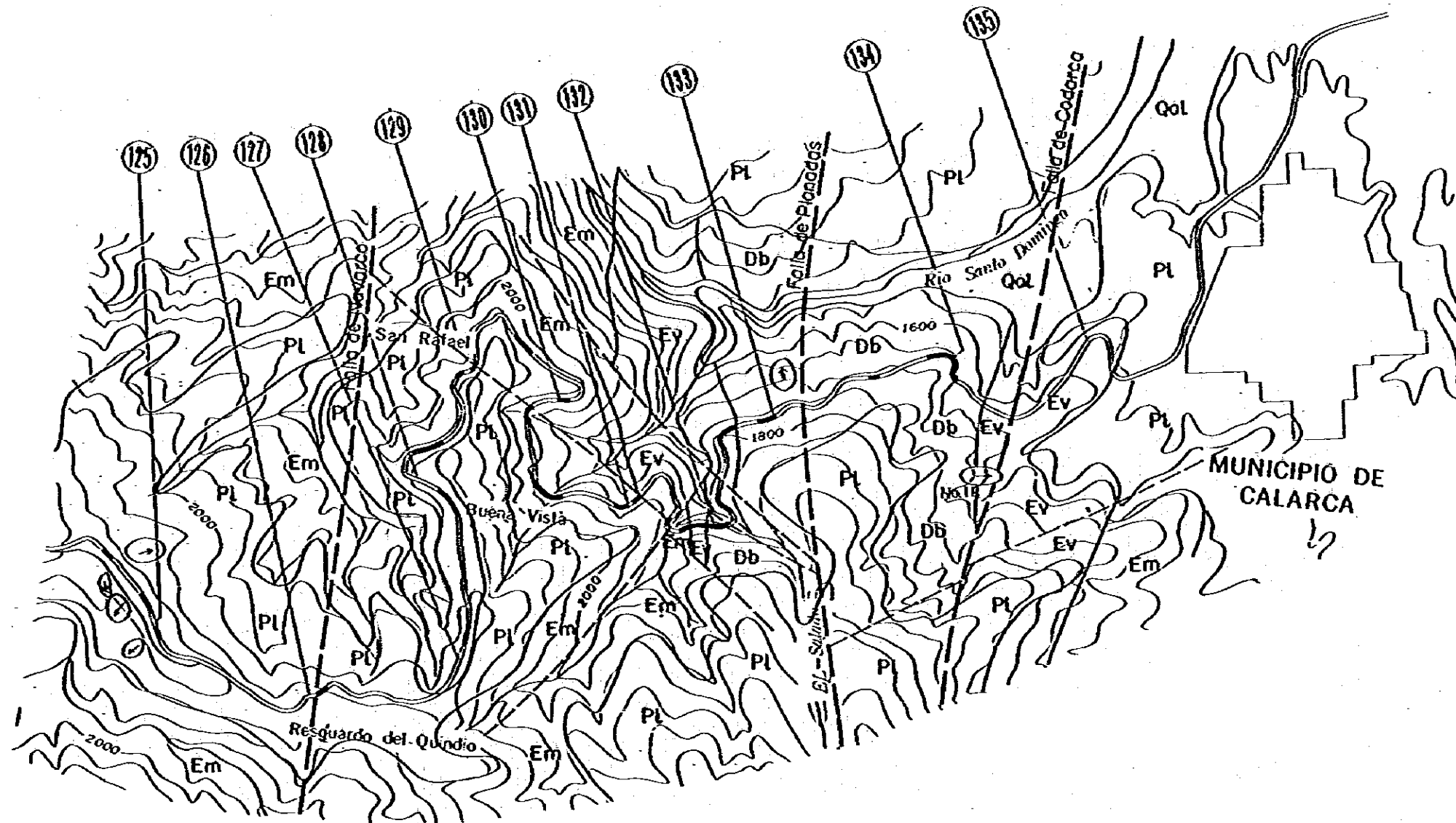
M O P T

BOGOTA — BUENAVENTURA  
ROAD PROJECT

GEOLOGIC AND GEOTECNIC MAP (7)  
km 114+000 — km 125+000

SCALE 1:25 000

DATE MARCH 1982  
SHEET No. 134 OF 135



M O P T

BOGOTÁ - BUENAVENTURA  
ROAD PROJECT

GEOLOGIC AND GEOTECHNIC MAP (8)  
km 125+000 - km 135+600

SCALE 1:200 000

DATE MARCH 1982

SHEET No. 135 OF 135

JICA