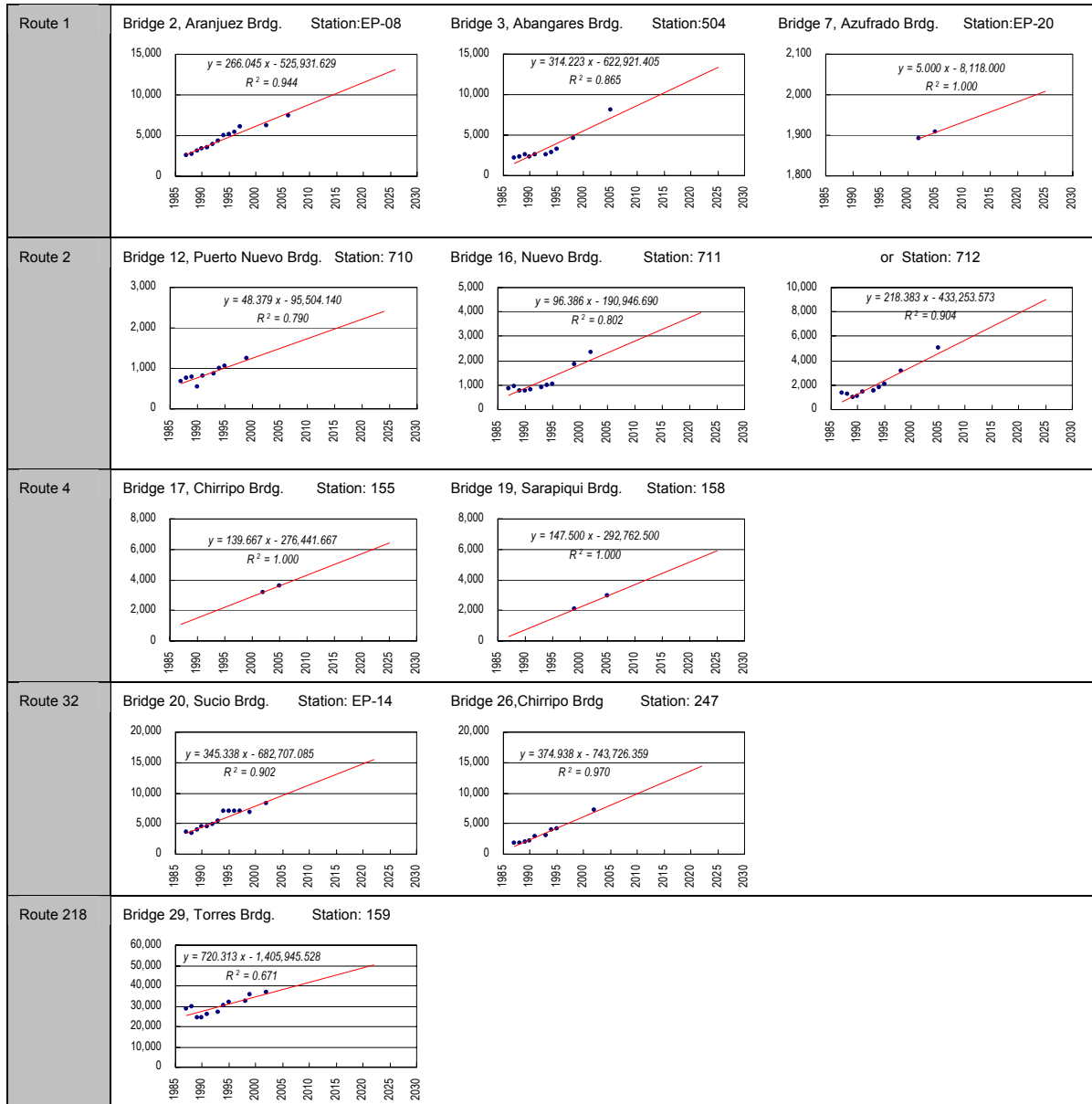


APÉNDICE 4 ANÁLISIS ECONÓMICO

4.1. RESULTADOS ESTIMADOS DEL VOLUMEN DE TRÁFICO

1. Resultados del Volumen de Tráfico de Cada Puesto



2. Datos Historicos del Volumen de Tráfico de Cada Punte

Note

- TPD means the Traffic per Day
- The value of each vehicle category is the % of TPD.

Source : MOPT Planification

year	R1														
	No2					No3					No7				
	TPD	Passenger	2or3-axis	Bus	5-axis	TPD	Passenger	2or3-axis	Bus	5-axis	TPD	Passenger	2or3-axis	Bus	5-axis
1987	2,628	40.0	33.0	5.7	21.2	2,145	39.5	30.6	7.3	22.6					
1988	2,740	39.3	31.9	6.4	22.4	2,360									
1989	3,095	40.7	30.9	6.5	22.0	2,590	41.3	29.8	5.7	23.3					
1990	3,370	33.5	33.2	6.6	26.6	2,245	35.7	32.5	6.8	25.0					
1991	3,468					2,550	34.3	32.2	6.6	26.9					
1992	3,872	36.6	29.9	5.1	28.4										
1993	4,274	41.2	30.3	6.7	21.9	2,570	38.5	29.7	6.8	25.0					
1994	4,970					2,855									
1995	5,140	32.3	27.1	5.5	35.1	3,200	33.6	28.2	5.9	32.3					
1996	5,460														
1997	6,120														
1998						4,625	39.4	27.6	5.5	27.5					
1999															
2000															
2001															
2002	6,194	43.1	25.0	5.9	26.0						1,892	46.3	21.5	7.4	24.9
2003															
2004															
2005	7,452	45.0	19.7	5.1	30.2	8,120	36.5	27.9	5.7	29.9	1,907	42.2	15.5	4.9	37.4
2006	7,452	45.0	19.7	5.1	30.2										

year	R2										R4									
	No12					No16					No17					No19				
	TPD	Passenger	2or3-axis	Bus	5-axis	TPD	Passenger	2or3-axis	Bus	5-axis	TPD	Passenger	2or3-axis	Bus	5-axis	TPD	Passenger	2or3-axis	Bus	5-axis
1987	680	32.9	31.4	6.0	29.7	855														
1988	750					940														
1989	795					780	30.5	33.0	6.7	29.9										
1990	540	25.4	30.7	8.0	35.9	780	29.1	42.8	5.3	22.8										
1991	800	30.2	39.1	4.9	25.8	815	27.9	42.7	6.2	23.1										
1992																				
1993	865	36.2	29.7	5.9	28.2	915	33.5	38.3	5.2	23.0										
1994	990	35.5	29.2	5.3	30.0	1,010	21.1	39.0	6.8	33.1										
1995	1,050	35.8	29.5	5.6	29.1	1,050	35.0	37.2	5.4	22.4										
1996																				
1997																				
1998																				
1999	1,235	35.8	31.1	4.5	28.6	1,835	36.4	36.9	6.3	20.5					2,090	32.9	34.5	3.8	28.9	
2000																				
2001																				
2002						2,326					3,171									
2003																				
2004																				
2005											3,590	43.7	27.2	2.9	26.1	2,975	33.0	34.1	3.7	29.2
2006																				

year	R32										R218									
	No20					No26					No29									
	TPD	Passenger	2or3-axis	Bus	5-axis	TPD	Passenger	2or3-axis	Bus	5-axis	TPD	Passenger	2or3-axis	Bus	5-axis					
1987	3,546	35.6	34.1	6.0	24.3	1,750	20.3	29.2	8.3	42.2	28,800									
1988	3,488	41.5	31.8	6.5	20.2	1,780					29,970	62.5	23.9	9.9	3.7					
1989	3,936	37.1	34.4	4.8	23.8	1,920					24,250	64.5	22.1	10.4	3.0					
1990	4,433	37.7	31.9	6.3	24.1	2,110					24,270	64.4	20.6	12.4	2.6					
1991	4,577	32.5	34.9	6.7	25.9	2,905					26,055	64.8	21.1	12.0	2.2					
1992	4,910	35.9	34.9	5.4	23.8															
1993	5,462	38.7	34.9	6.0	20.4	2,995					27,110	70.8	14.8	12.5	1.9					
1994	6,950	39.2	32.8	4.9	23.2	3,890	29.2	30.5	4.2	36.1	30,525									
1995	6,993	42.3	28.2	5.9	23.7	4,185	33.3	26.2	4.8	35.7	31,870	72.1	15.3	10.3	2.3					
1996	7,040	42.4	27.7	5.5	24.4															
1997	7,075	39.5	27.0	6.0	27.6															
1998											32,660	75.5	12.7	10.6	1.2					
1999	6,770	38.3	23.7	4.0	34.0						35,825	77.7	11.9	8.9	1.5					
2000																				
2001																				
2002	8,360	45.5	18.1	3.3	33.2	7,194					36,854									
2003																				
2004																				
2005																				
2006																				

4.2. PARAMETRO DEL COV

Km/h	Passenger	2-axis	5-axis
15	169,551.5	249,296.6	298,878.1
20	139,549.0	190,113.4	237,973.1
25	118,714.8	149,747.3	195,425.2
30	104,449.6	122,564.2	169,101.8
35	93,922.5	104,409.1	150,142.6
40	86,278.5	95,490.2	142,305.1
45	80,686.0	91,468.6	141,492.3
50	76,898.6	91,608.9	140,589.0
55	74,094.6	93,565.5	147,737.8
60	72,571.2	97,218.5	153,744.6
65	71,726.2	101,914.7	162,202.1
70	70,922.8	106,054.3	166,745.8
75	70,520.0	109,713.4	176,849.6
80	69,594.0	113,714.7	182,677.3
85	69,501.3	116,519.2	192,472.5

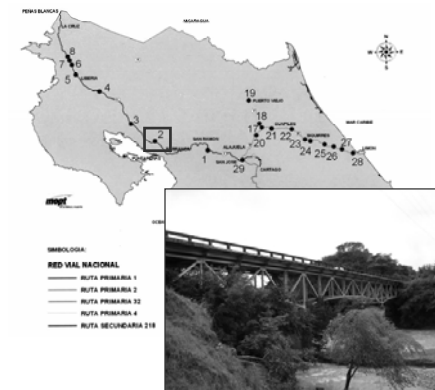
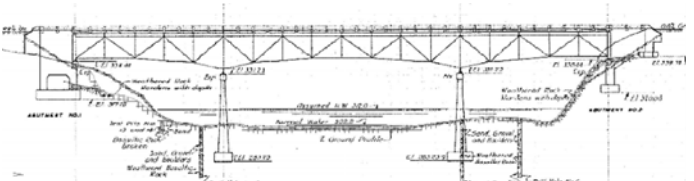
Note

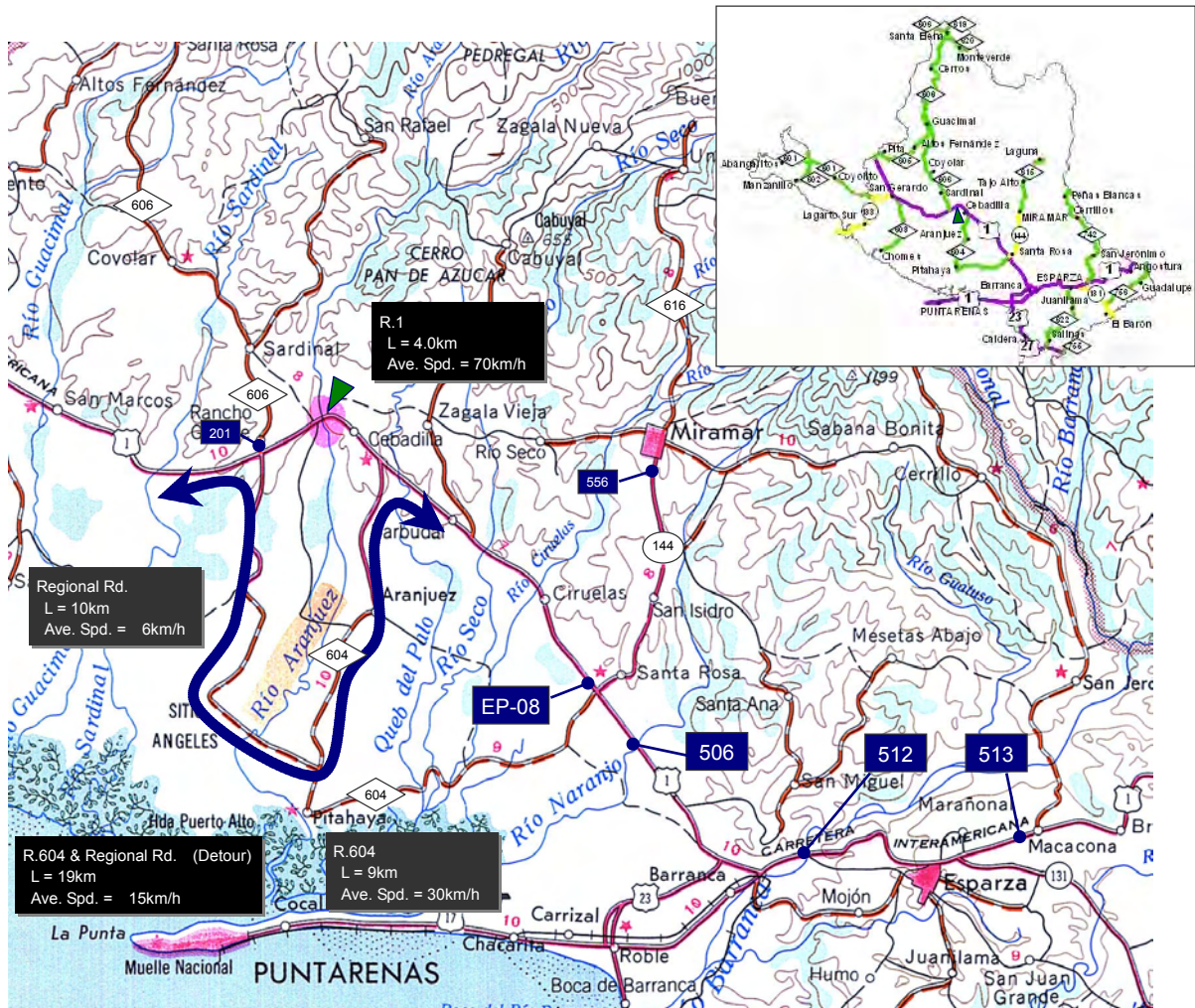
- Unit : colone/'000km in 2004 price
- VOC is summed up by the each category according to the HDM-III regulation.
 - Fuel / Combustible
 - Lubricant / Lubricante
 - Tires / Llantas
 - Manpower / Mano de Obra
 - Reserves / Repuestos
 - Depreciation / Depreciacion
 - Interest / Intereses

Source : MOPT Planification

4.3. RUTAS DEL DESVÍO Y UBICACIÓN DE PUENTES

1. Ubicación de Puente Rio Aranjuez (No.2)

<p>Ubicación : Puntarenas Province</p>  <p>Simbología: RED VIAL NACIONAL --- RUTA PRIMARIA 1 --- RUTA PRIMARIA 2 --- RUTA PRIMARIA 3 --- RUTA PRIMARIA 4 --- RUTA SECUNDARIA 218</p>	<p>Vista Lateral</p>  <p>Diseñado: 1950/11/17 Terminado: 1955</p> <p>Length: 87.78m, Design Live Load: H15-S12</p> <p>Sup: Steel Truss</p> <p>Sub: Wall Type Pier, Rigid Frame Abutment</p> <p>Foundation: Spread Foundations</p>
--	---



EP-08	1995	5,140 TPD	6.4%/year
	1998	6,194 TPD	4.7%/year
	2002	7,452 TPD	(5.5%/year)



506	1995	4,850 TPD	10.1%/year
	2002	9,507 TPD	

512	1995	7,655 TPD	8.8%/year
	2002	13,780 TPD	

513	1995	5,500 TPD	4.0%/year
	2002	7,218 TPD	

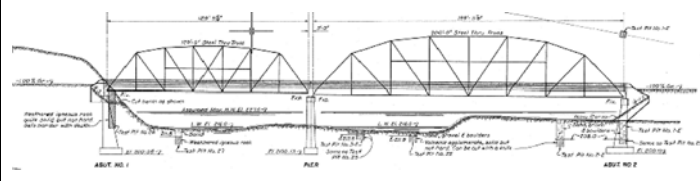
2. Ubicación de Puente Rio Abangares (No.3)

Ubicación : Guanacaste Province

RED VIAL NACIONAL
 - - - - - RUTA PRIMARIA 1
 - - - - - RUTA PRIMARIA 2
 - - - - - RUTA PRIMARIA 4
 - - - - - RUTA SECUNDARIA 218

Vista Lateral



Diseñado: 1952/03/07 Terminado: 1953
Length: 101.34m, Design Live Load: H15-S12-44
Sup: Steel Thru Truss
Sub: Wall Type Pier, Rigid Frame Abutment
Foundation: Spread Foundations

