

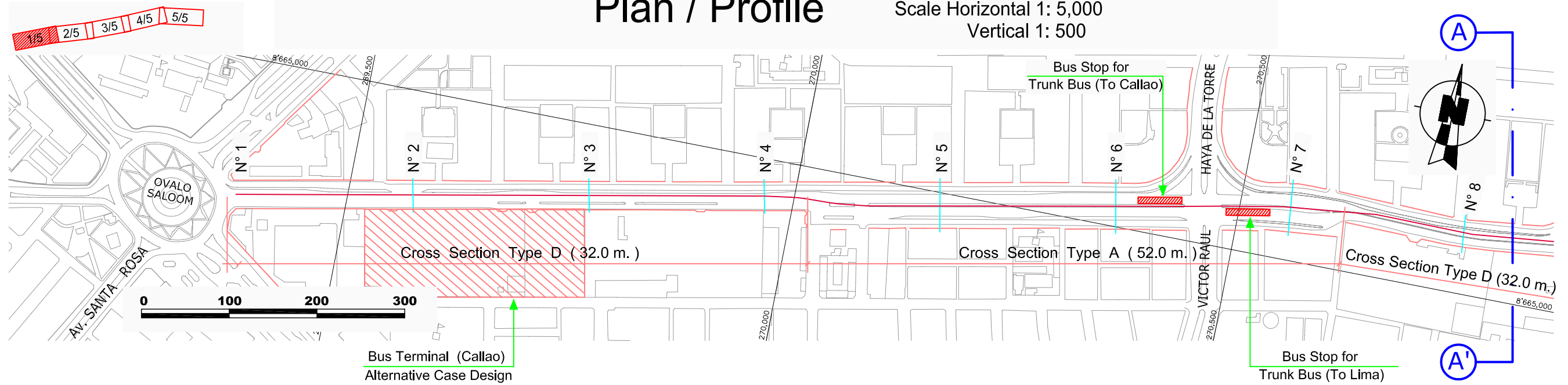
Alternative Case Design on Av. Venezuela

- 1) Alternative case design was conducted based on the "without additional land acquisition" case.**
- 2) Alternative case design was conducted on Plan & Profile design and cross section design and construction cost estimate.**
- 3) Av. Arica, Av. Ayllon and Carretera Central was not required to additional land acquisition. Therefore, Alternative case design was not conducted.**

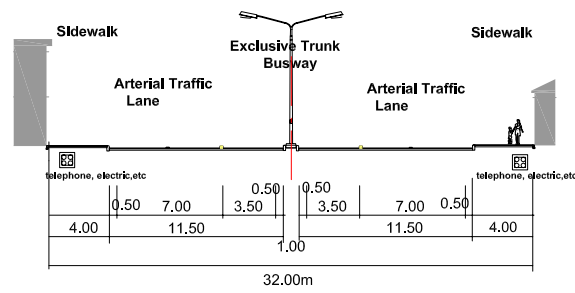
Av. Venezuela - Alternative Case Design (1 / 5)

Plan / Profile

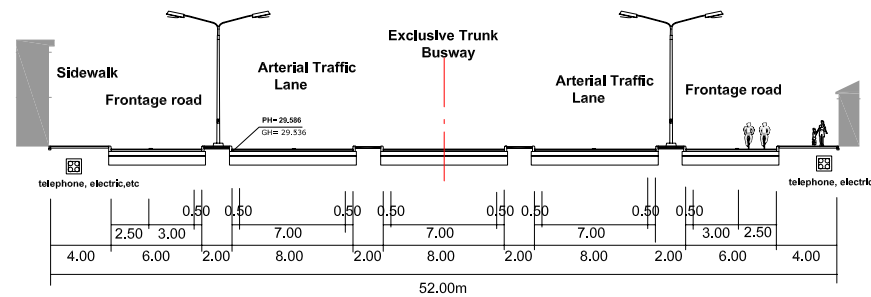
Scale Horizontal 1 : 5,000
Vertical 1 : 500



Typical Cross Section Type - D



Typical Cross Section Type - A

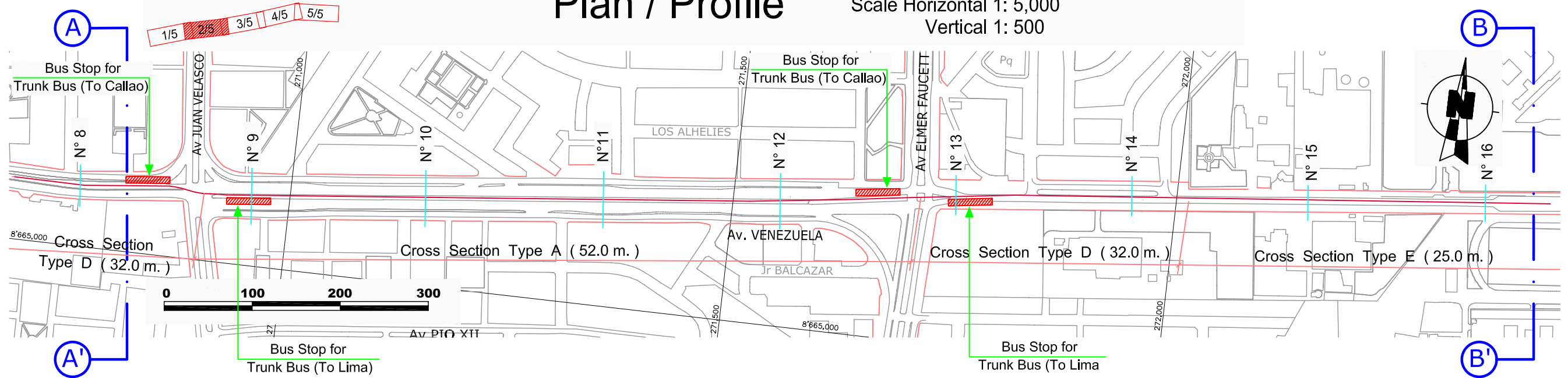


Gradient	Proposed Height	Ground Level	Distance	Number
			-75.50	N° 00
			-22.924	N° 01
± 0.14 % L=200.0 m			-200.00	N° 02
			-400.00	N° 03
			-600.00	N° 04
± 1.22 % L=1,200.0 m			-800.00	N° 05
			-1000.0	N° 06
			-1200.0	N° 07
			-1400.0	N° 08

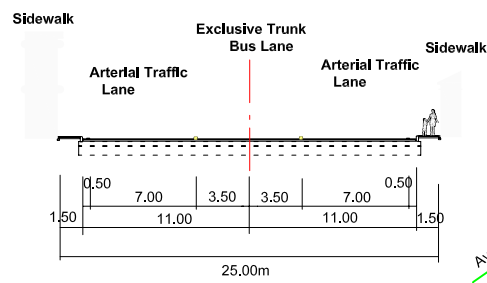
Av. Venezuela - Alternative Case Design (2 / 5)

Plan / Profile

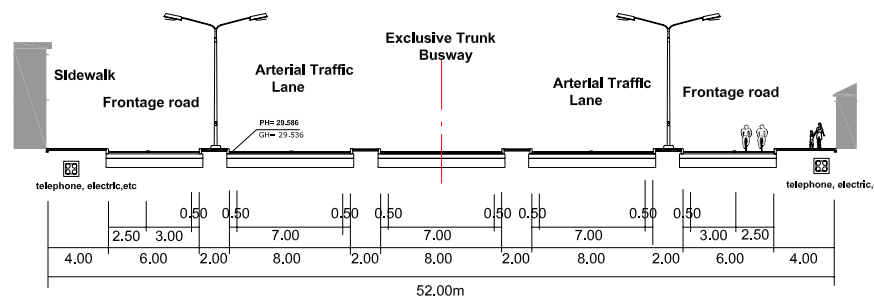
Scale Horizontal 1: 5,000
Vertical 1: 500



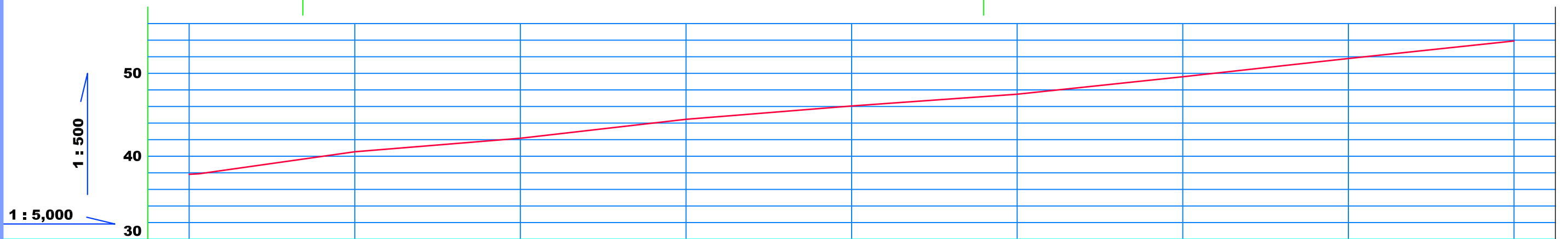
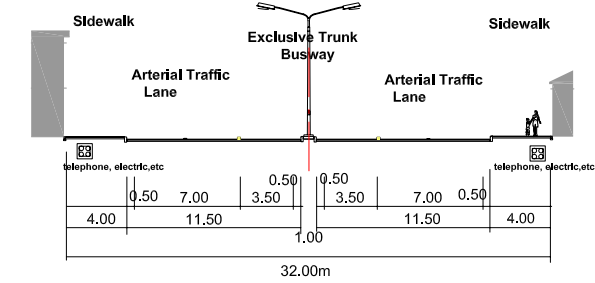
Typical Cross Section Type - E



Typical Cross Section Type - A



Typical Cross Section Type - E

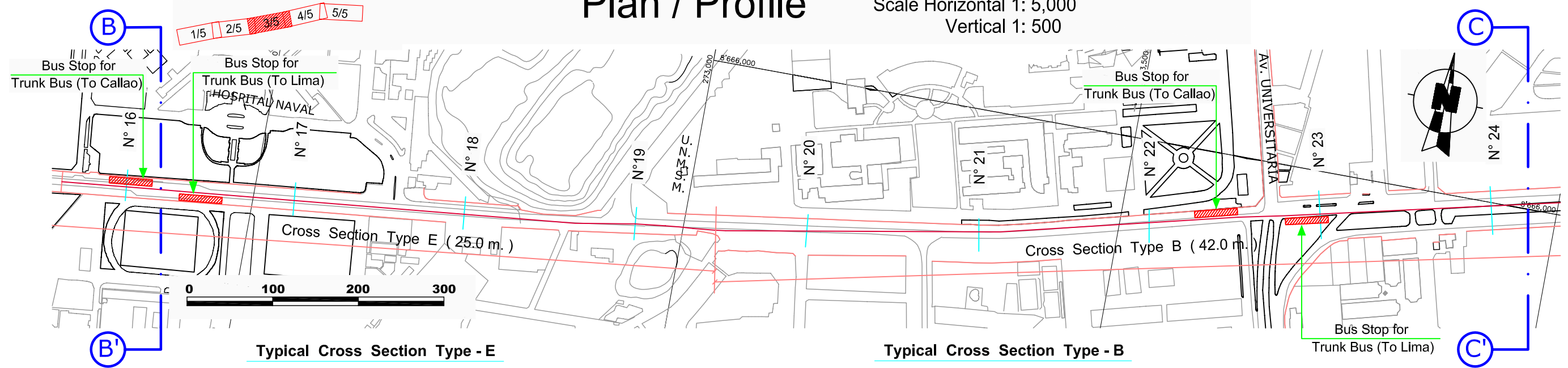


Gradient	Proposed Height	Ground Level	Distance	Number
	37.865	37.865	1400.0	N° 08
	40.585	40.535	1600.0	N° 09
	42.220	42.170	1800.0	N° 10
	44.503	44.453	2000.0	N° 11
	46.109	46.059	2200.0	N° 12
	47.528	47.478	2400.0	N° 13
	49.628	49.578	2600.0	N° 14
	51.836	51.786	2800.0	N° 15
	53.948	53.898	3000.0	N° 16

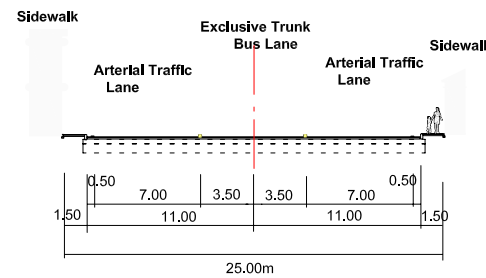
Av. Venezuela - Alternative Case Design (3 / 6)

Plan / Profile

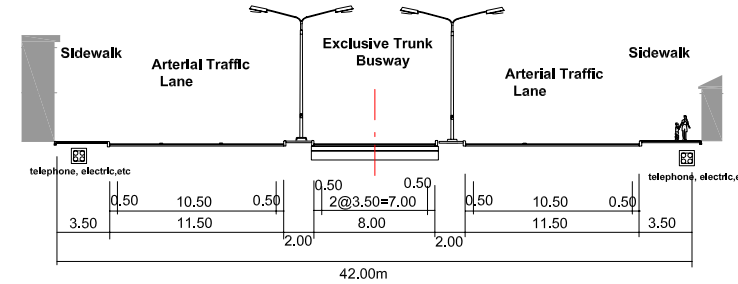
Scale Horizontal 1: 5,000
Vertical 1: 500



Typical Cross Section Type - E



Typical Cross Section Type - B



Av. Universitaria
N° 4 + 343.80 m

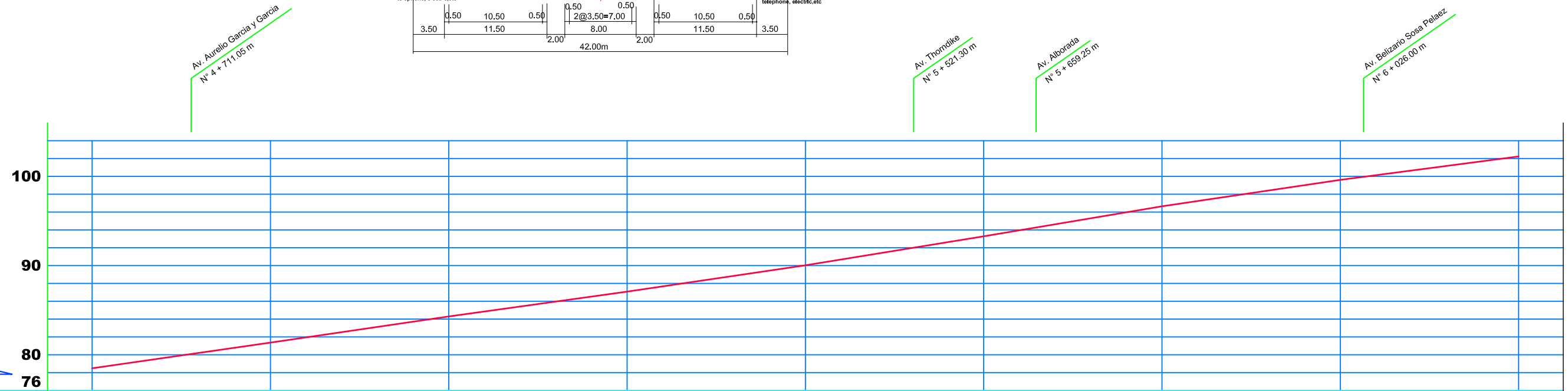
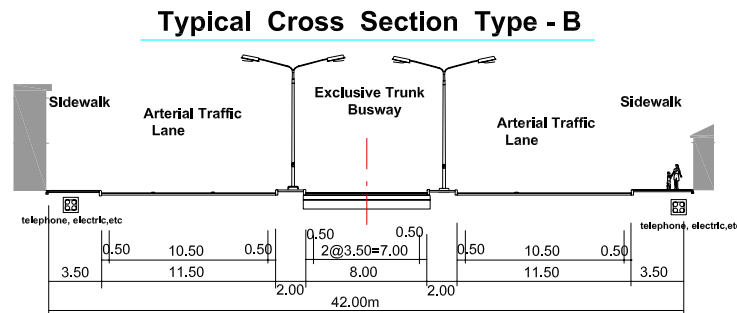
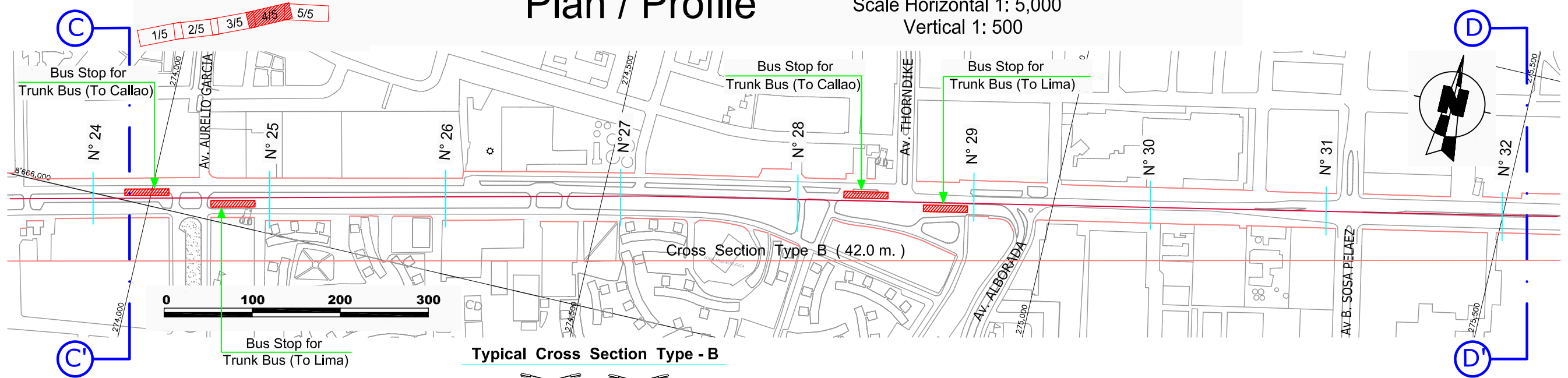


Gradient	Proposed Height	Ground Level	Distance	Number
				N° 16 -3000.0 -53.948
				N° 17 -3200.0 -58.308
				N° 18 -3400.0 -63.242
				N° 19 -3600.0 -66.770
				N° 20 -3800.0 -66.872
				N° 21 -4000.0 -69.041
				N° 22 -4200.0 -71.882
				N° 23 -4400.0 -74.940
				N° 24 -4600.0 -78.536

Av. Venezuela - Av. Alternative Case Design (4 / 5)

Plan / Profile

Scale Horizontal 1: 5,000
Vertical 1: 500

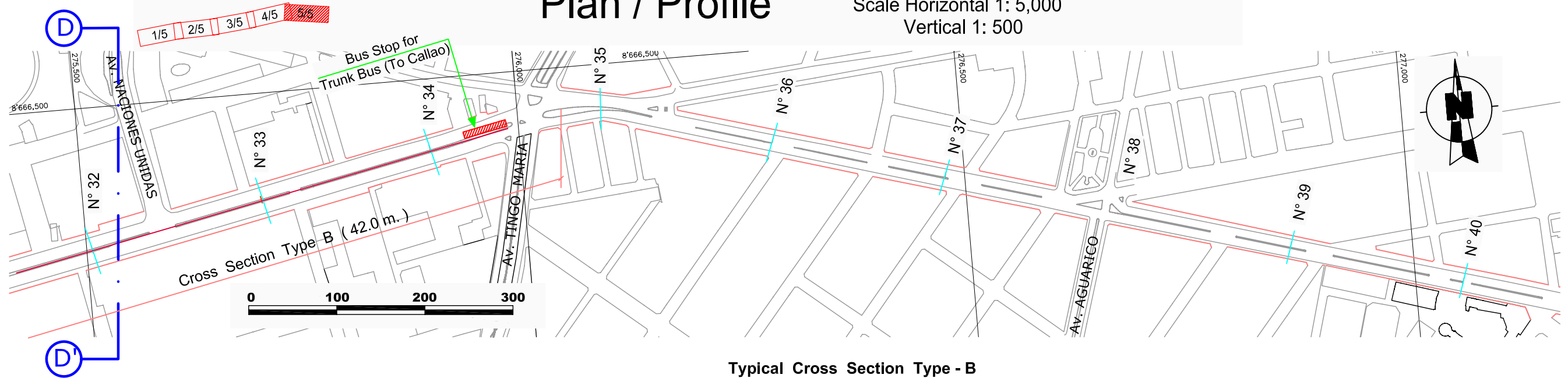


Gradient	Proposed Height	Ground Level	Distance	Number
	78.536	-78.536	-4600.0	N° 24
		-81.414	-4800.0	N° 25
$i = 1.44\%$ $L = 800.0\text{ m}$		-84.349	-6000.0	N° 26
		-87.131	-6200.0	N° 27
		-90.064	-6400.0	N° 28
		-93.334	-6600.0	N° 29
$i = 1.53\%$ $L = 800.0\text{ m}$		-96.701	-6800.0	N° 30
		-99.866	-6000.0	N° 31
		-102.287	-6200.0	N° 32

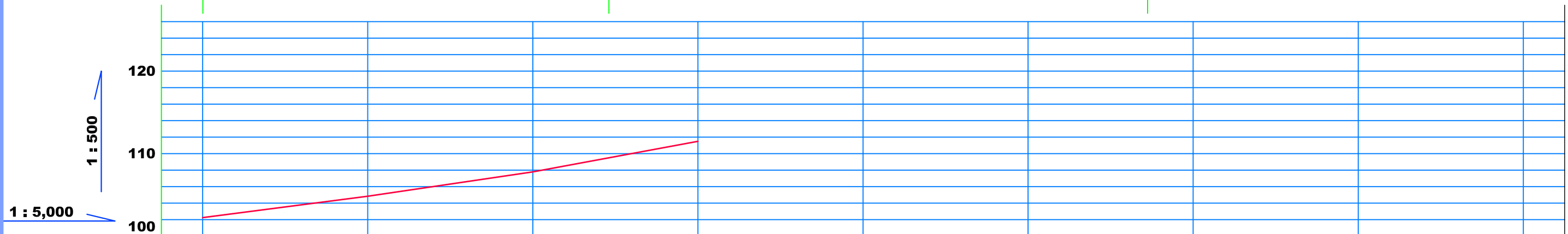
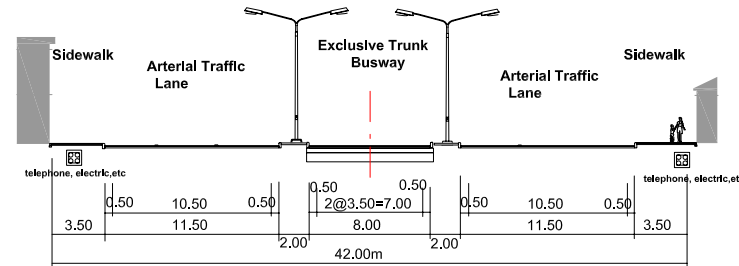
Av. Venezuela - Alternative Case Design (5 / 5)

Plan / Profile

Scale Horizontal 1: 5,000
Vertical 1: 500



Typical Cross Section Type - B



Gradient	Proposed Height	Ground Level	Distance	Number
				N° 32
1.39% L=400.0 m				N° 33
1.85% L=200.0 m				N° 34
				N° 35
				N° 36
				N° 37
1.20% L=1,000.0 m				N° 38
				N° 39
				N° 40

Av. Venezuela
Alternative Case Design

TRANSPORT COUNCIL OF LIMA AND CALLAO (CTLC)
MINISTRY OF TRANSPORT AND COMMUNICATION (MTC)

JAPAN INTERNATIONAL
COOPERATION AGENCY
(JICA)

FEASIBILITY STUDY ON URBAN TRANSPORTATION IN THE LIMA AND CALLAO
METROPOLITAN AREA IN THE REPUBLIC OF PERU

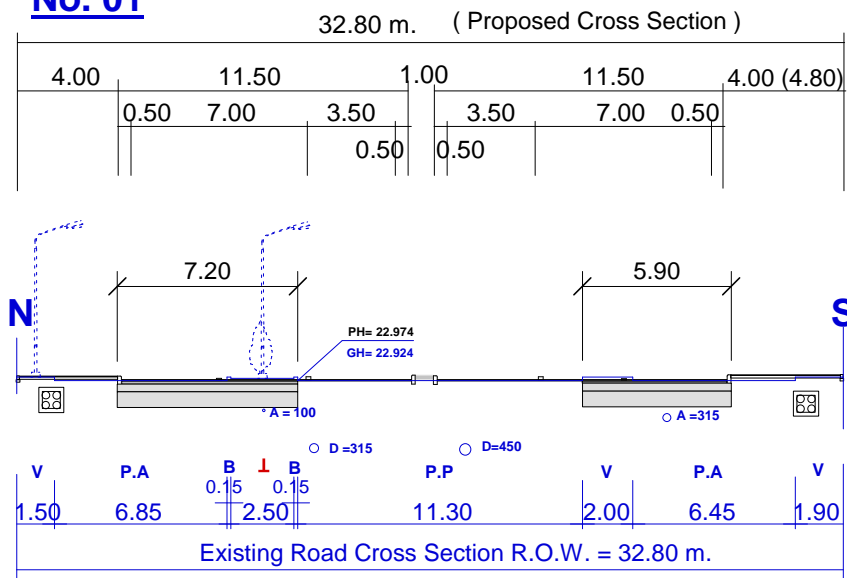
SCALE : H = 1 : 5,000 V = 1 : 500

DWG N°: 70 / 80

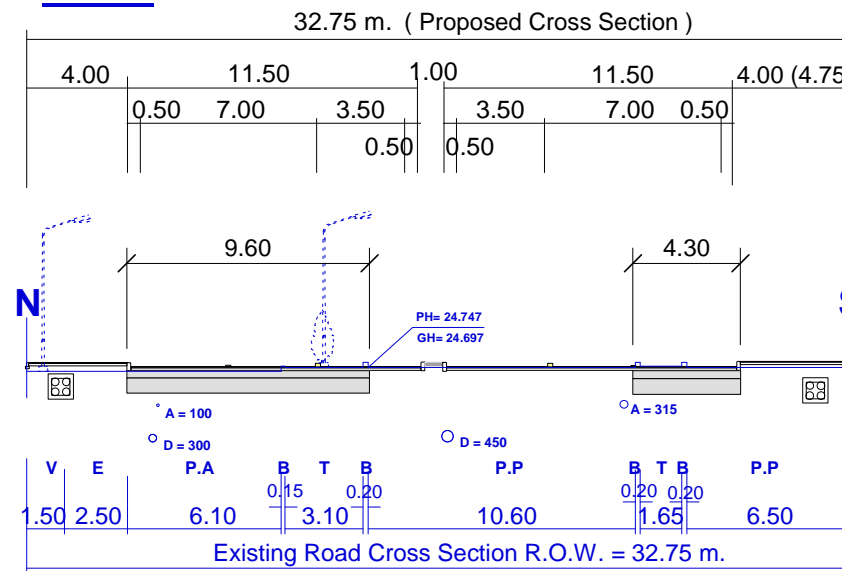
Cross Section (Alternative Case Design)

Av. Venezuela - 1 / 9

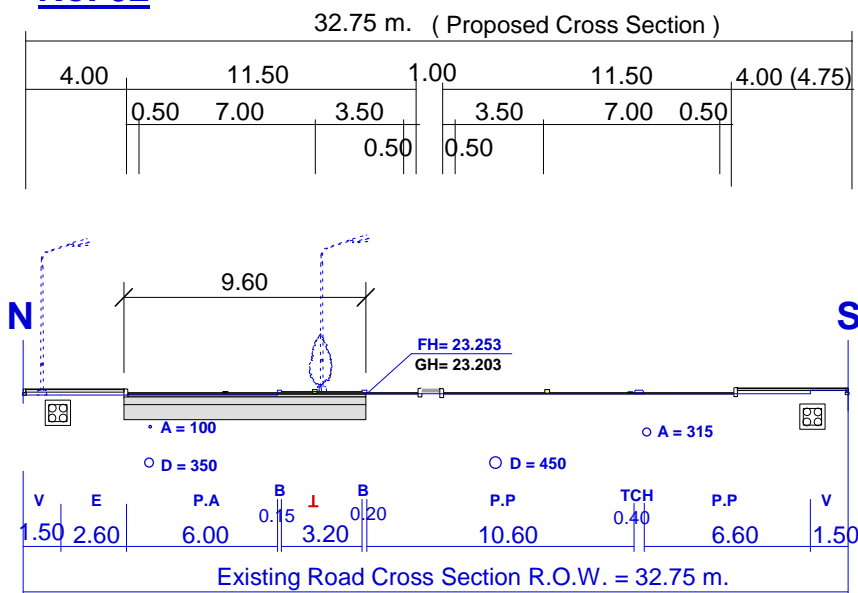
No. 01



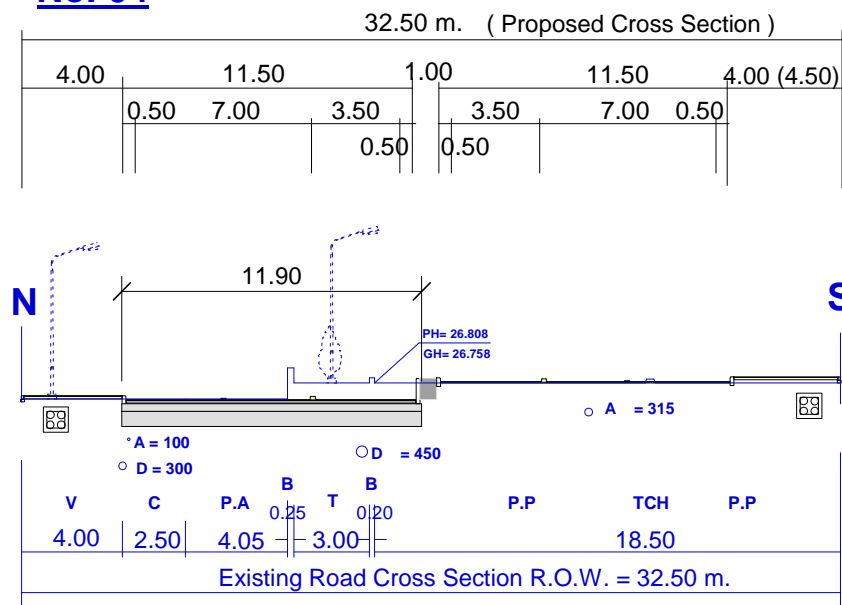
No. 03



No. 02



No. 04



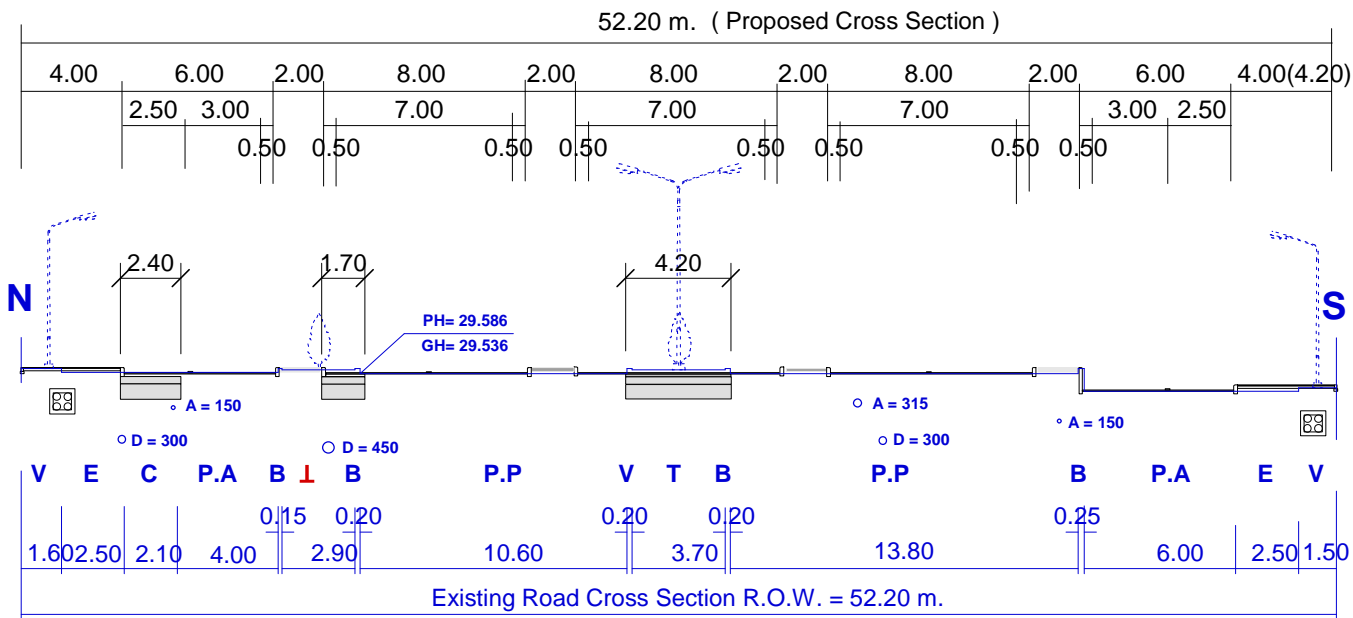
A : Agua
D : Desague
G : Gas

V : Vereda
P.A : Pista Auxiliar
P.P : Pista Principal
E : Estacionamiento
J : Jard\U+00edn
B : Berma
T : Tierra

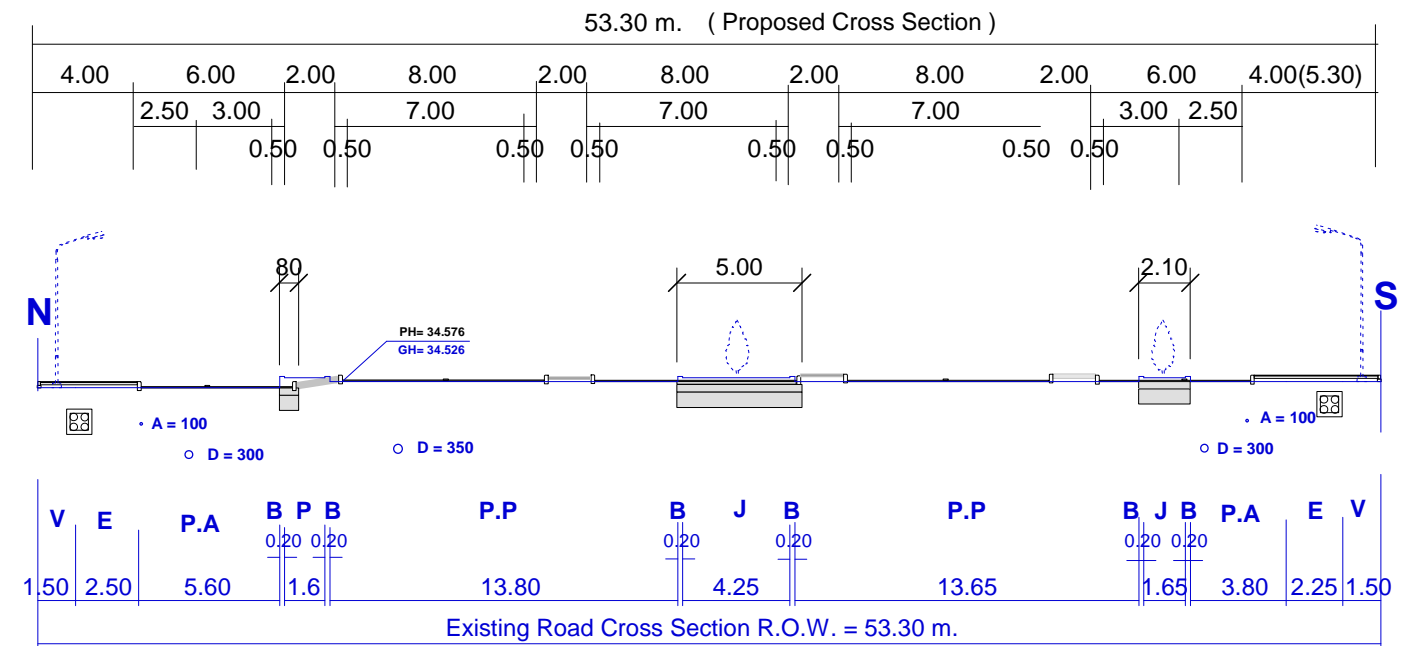
Cross Section (Alternative Case Design)

Av. Venezuela - 2 / 9

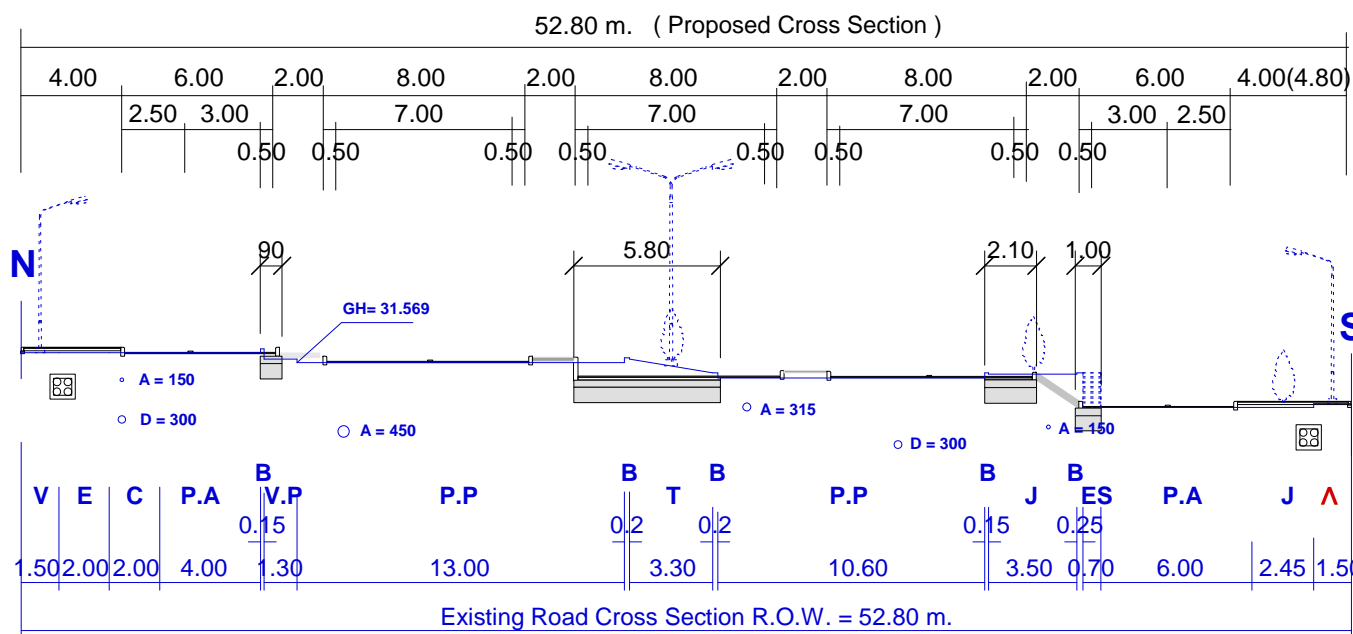
No. 05



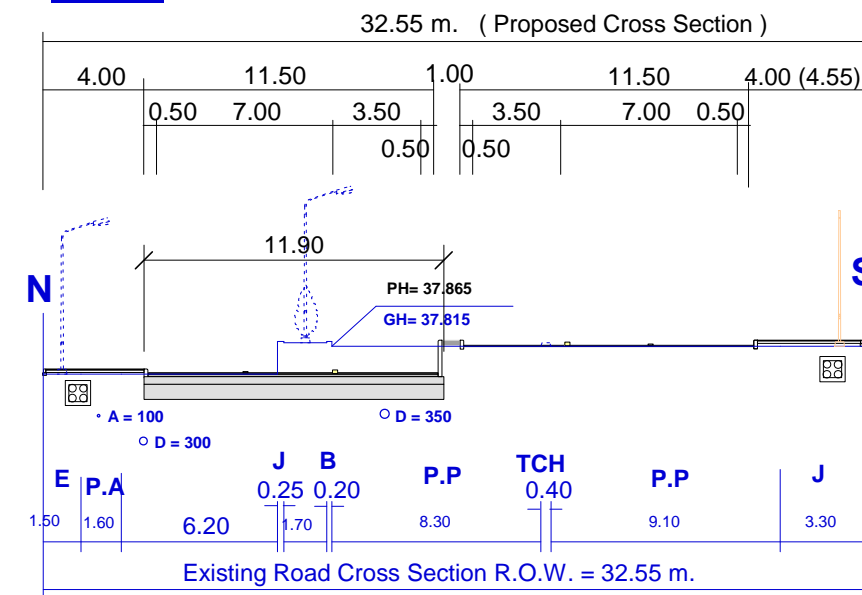
No. 07



No. 06



No. 08



A : Agua
D : Desague
G : Gas

V : Vereda
P.A : Pista Auxiliar
P.P : Pista Principal
E : Estacionamiento
J : JardU+00edn
B : Berma
T : Tierra

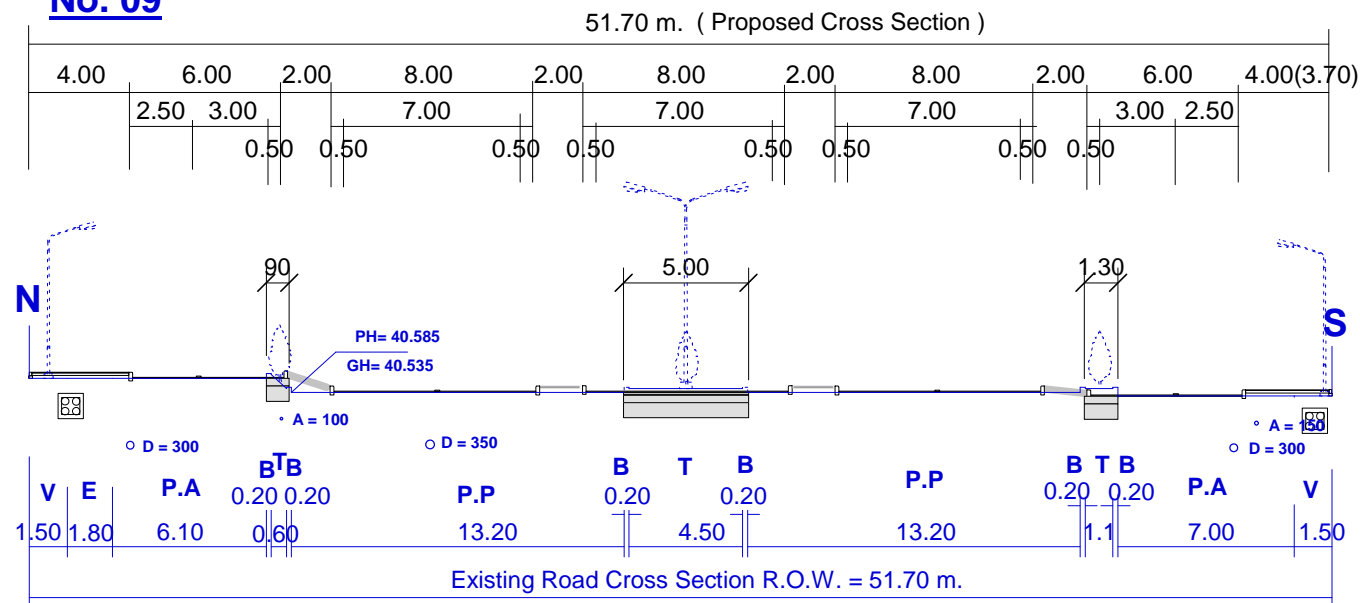
Cross Section (Alternative Case Design)

Av. Venezuela - 3 / 9

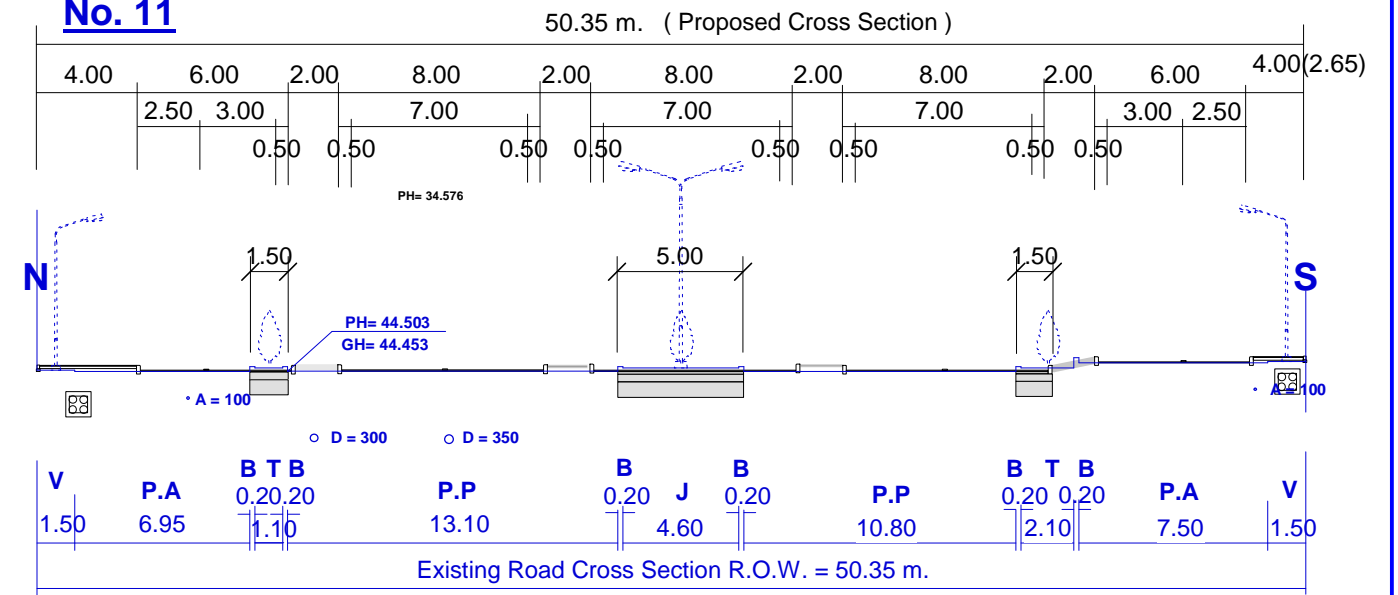
A : Agua
D : Desague
G : Gas

V : Vereda
P.A : Pista Auxiliar
P.P : Pista Principal
E : Estacionamiento
J : JardU+00edn
B : Berma
T : Tierra

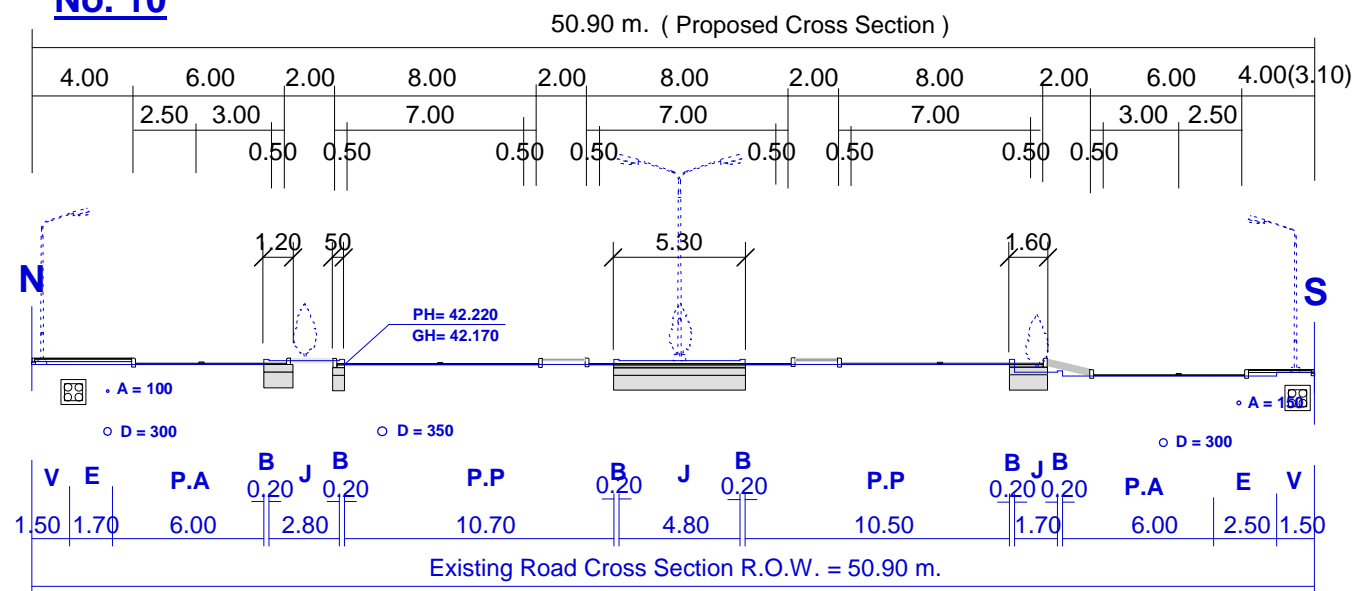
No. 09



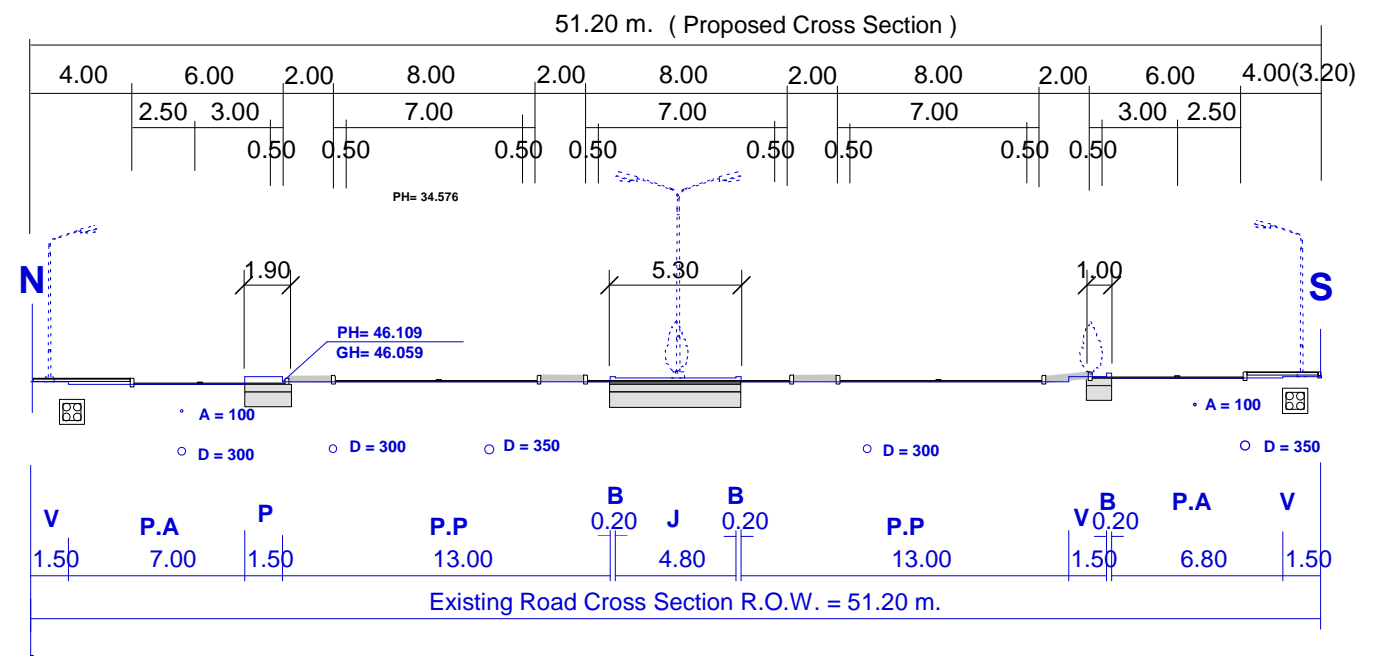
No. 11



No. 10



No. 12



Cross Section
(Alternative Case Design)

TRANSPORT COUNCIL OF LIMA AND CALLAO (CTLC)
MINISTRY OF TRANSPORT AND COMMUNICATION (MTC)

JAPAN INTERNATIONAL
COOPERATION AGENCY
(JICA)

FEASIBILITY STUDY ON URBAN TRANSPORTATION IN THE LIMA AND CALLAO
METROPOLITAN AREA IN THE REPUBLIC OF PERU

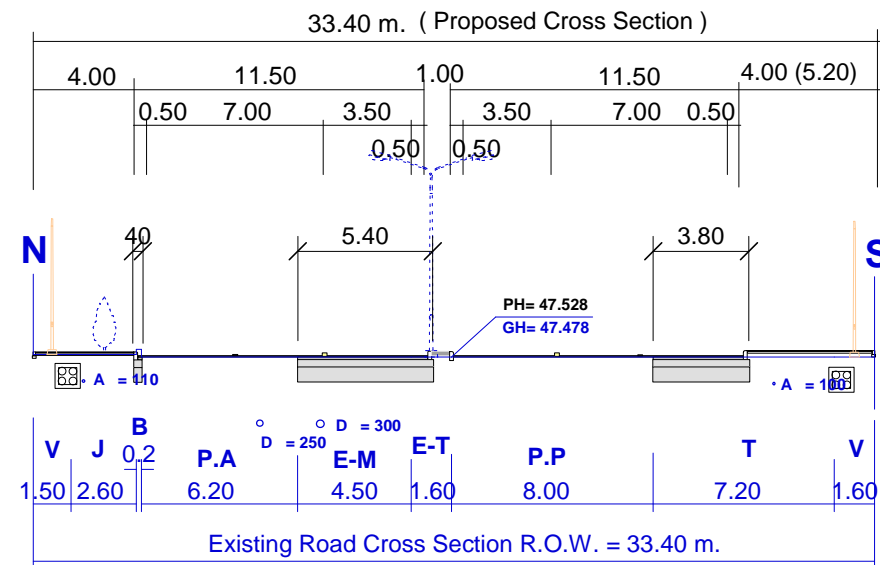
SCALE : 1 / 300

DWG No.: 73 / 80

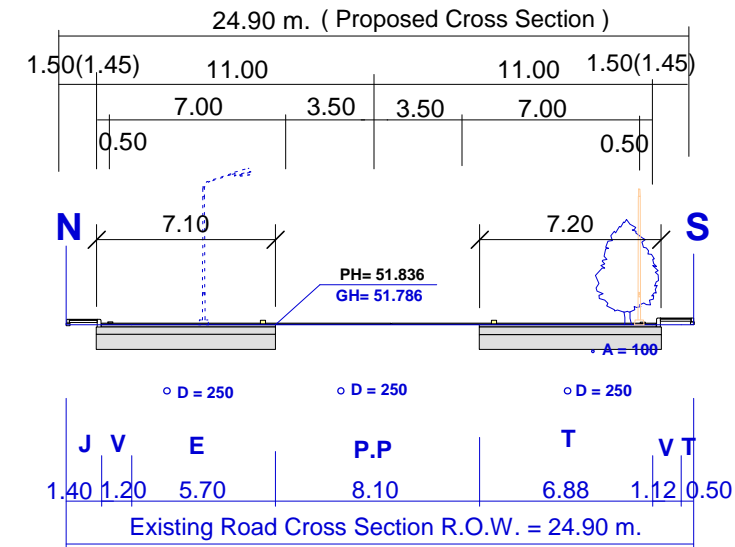
Cross Section (Alternative Case Design)

Av. Venezuela - 4 / 9

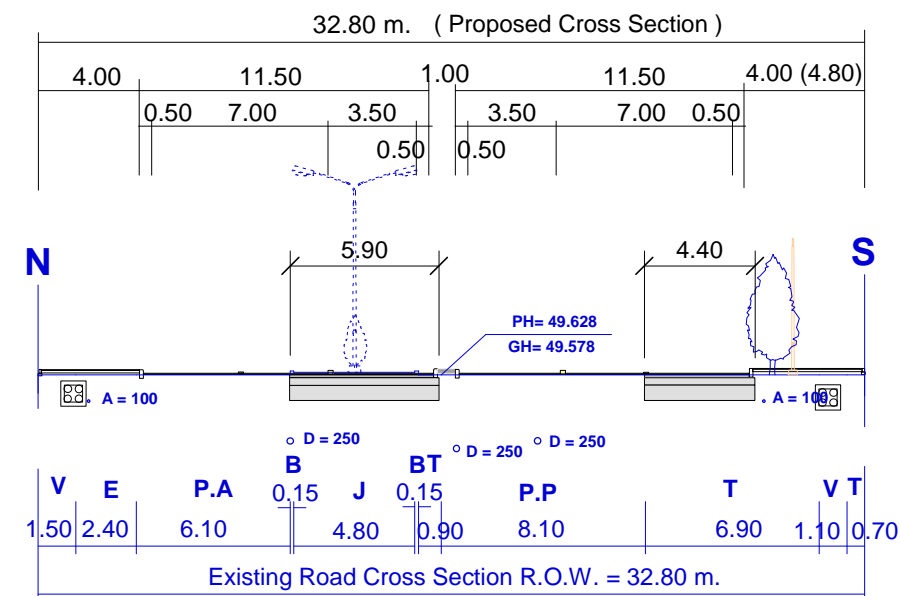
No. 13



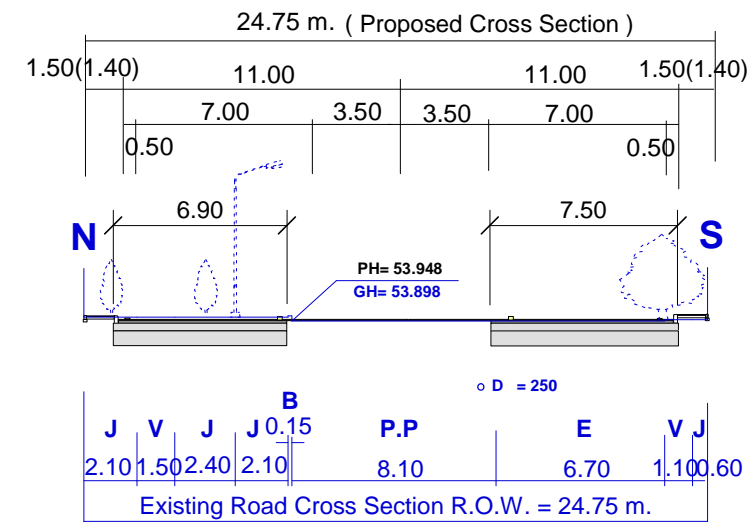
No. 15



No. 14



No. 16



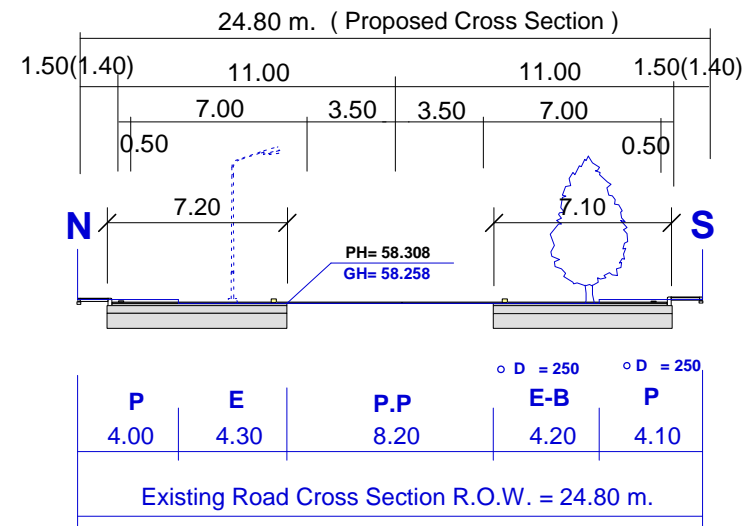
A : Agua
D : Desague
G : Gas

V : Vereda
P.A : Pista Auxiliar
P.P : Pista Principal
E : Estacionamiento
J : JardU+00edn
B : Berma
T : Tierra

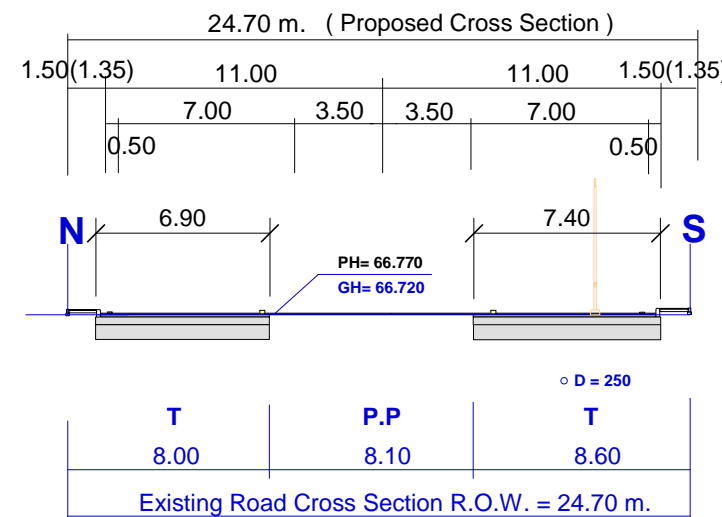
Cross Section (Alternative Case Design)

Av. Venezuela - 5 / 9

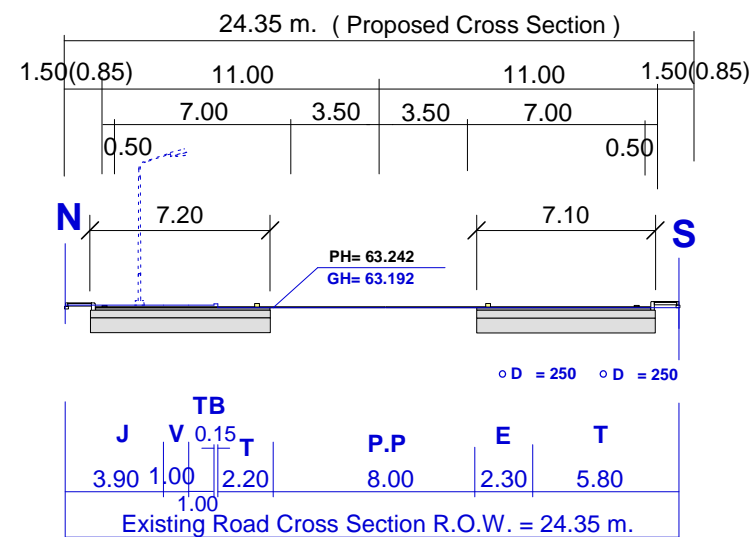
No. 17



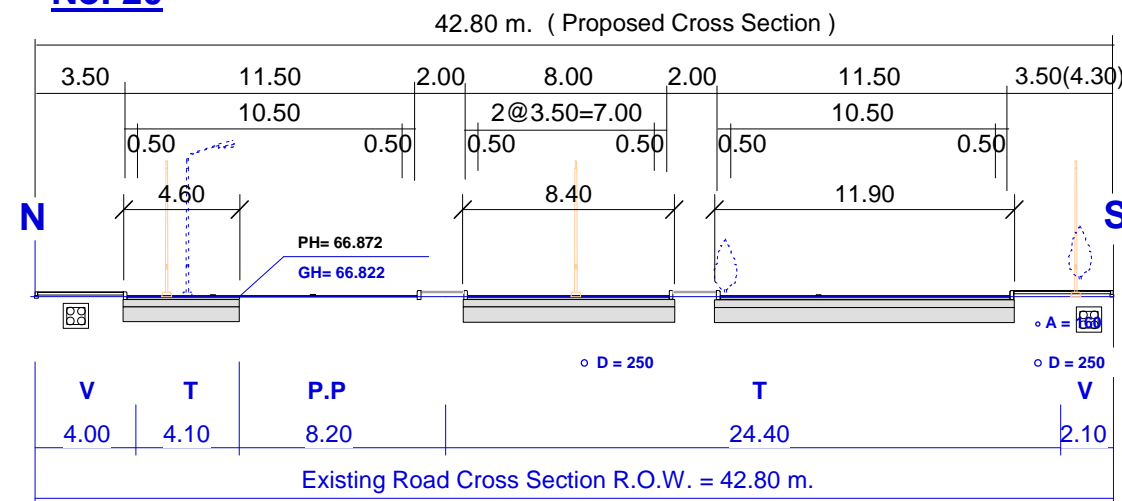
No. 19



No. 18



No. 20



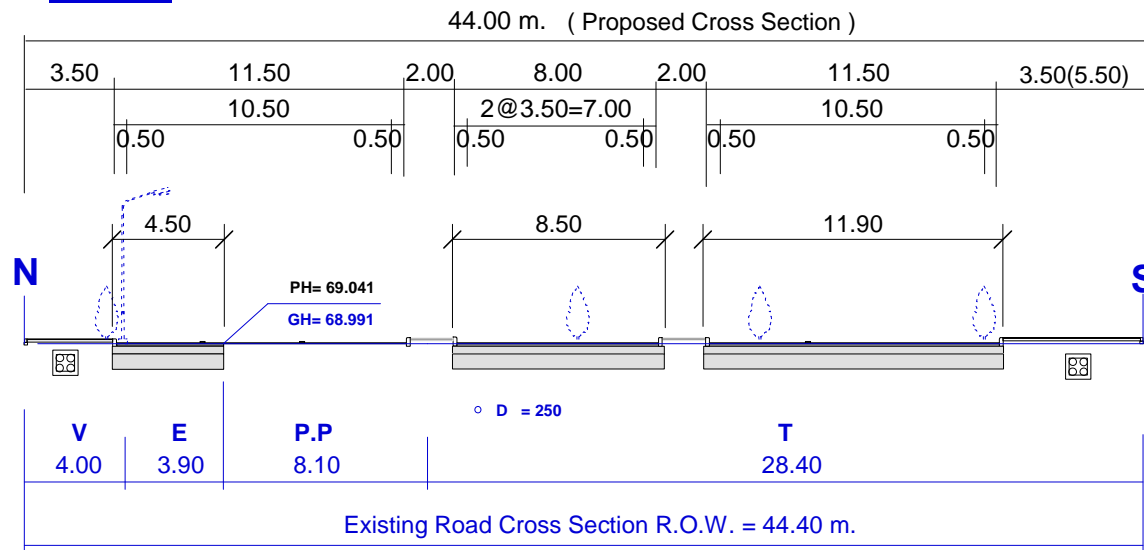
A : Agua
D : Desague
G : Gas

V : Vereda
P.A : Pista Auxiliar
P.P : Pista Principal
E : Estacionamiento
J : Jard\U+00edn
B : Berma
T : Tierra

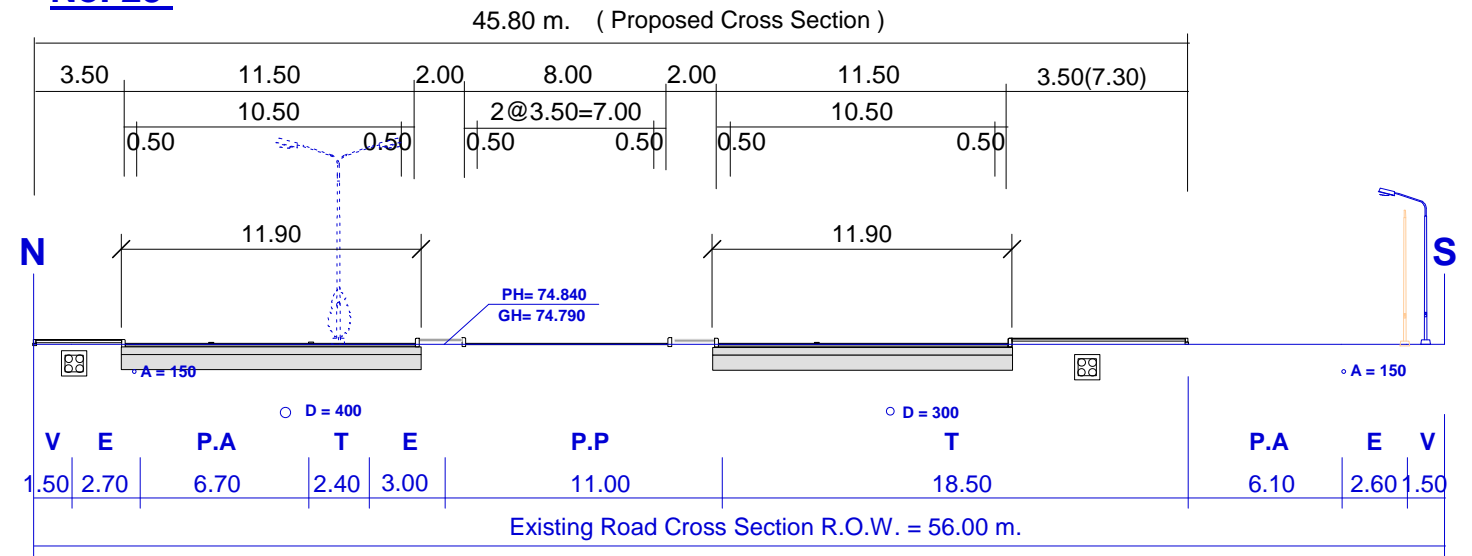
Cross Section (Alternative Case Design)

Av. Venezuela - 6 / 9

No. 21



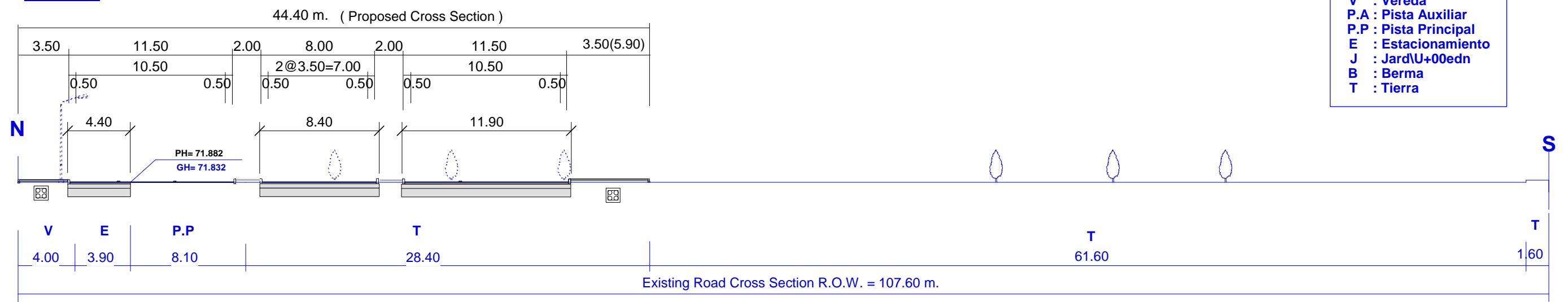
No. 23



A : Agua
 D : Desague
 G : Gas

V : Vereda
 P.A : Pista Auxiliar
 P.P : Pista Principal
 E : Estacionamiento
 J : Jard\U+00edn
 B : Berma
 T : Tierra

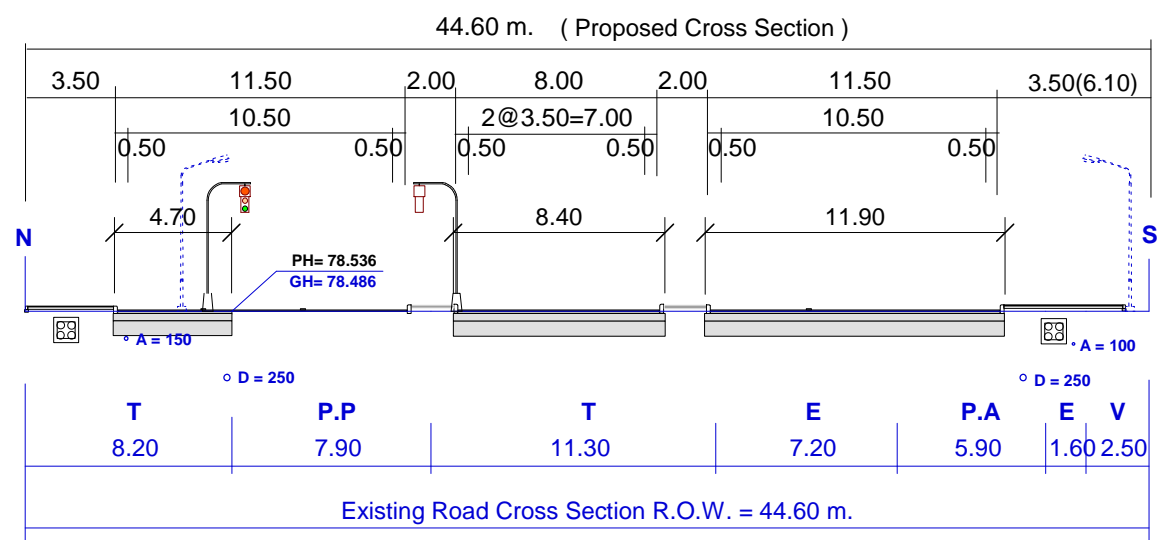
No. 22



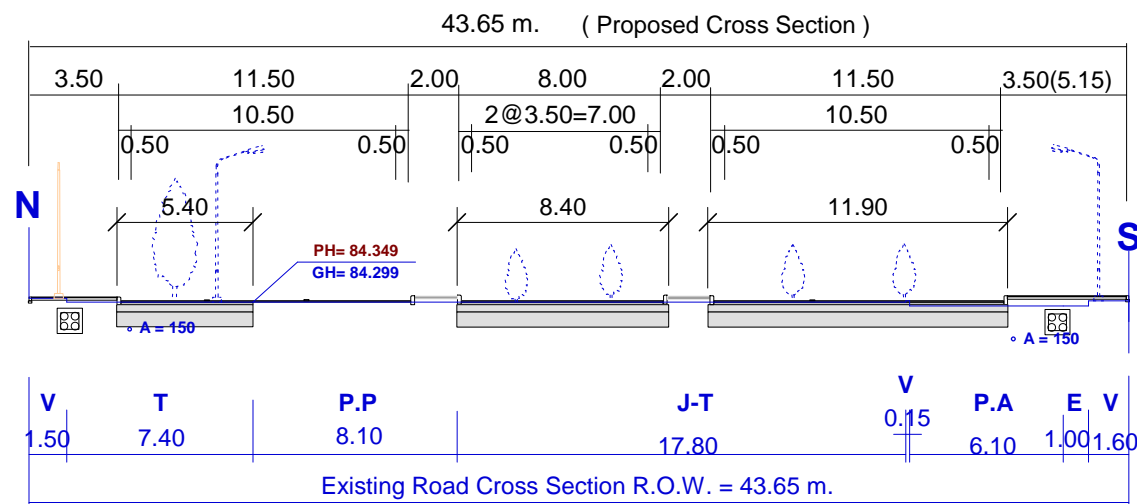
Cross Section (Alternative Case Design)

Av. Venezuela - 7 / 9

No. 24



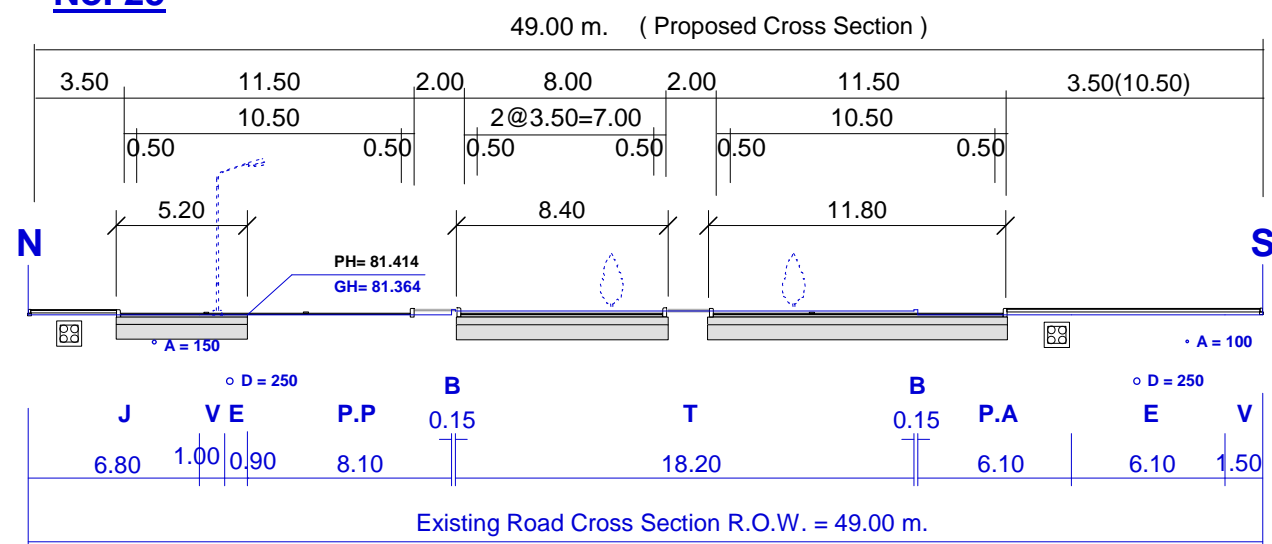
No. 26



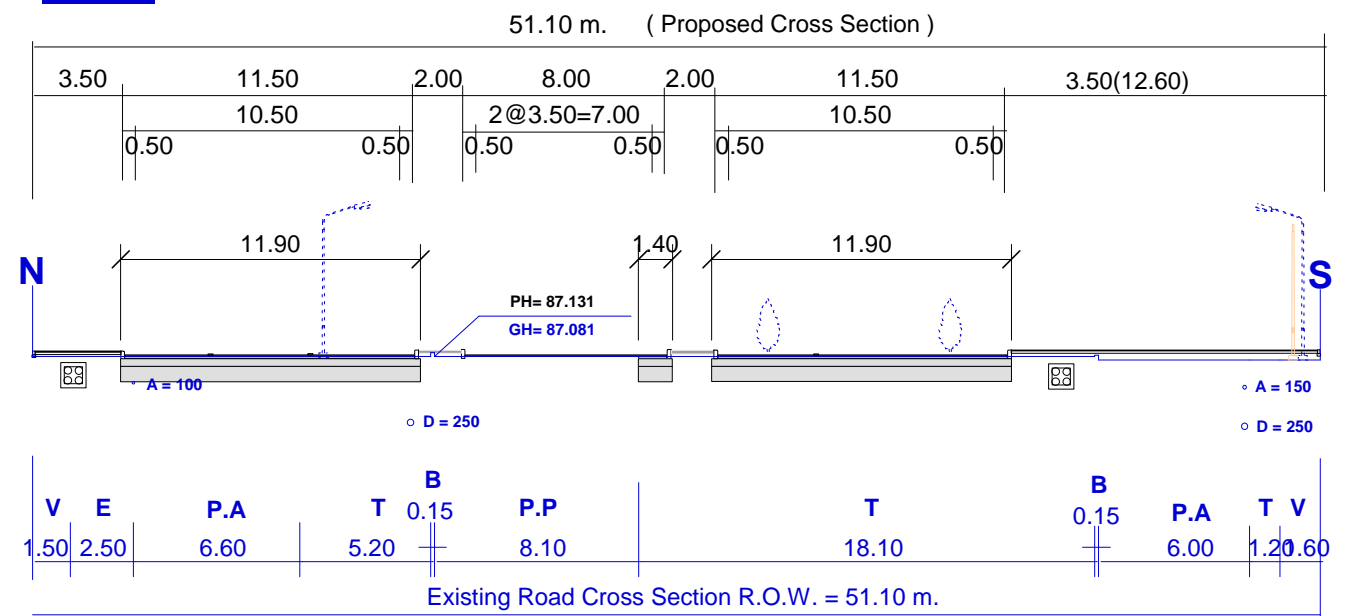
A : Agua
D : Desague
G : Gas

V : Vereda
P.A : Pista Auxiliar
P.P : Pista Principal
E : Estacionamiento
J : JardU+00edn
B : Berma
T : Tierra

No. 25



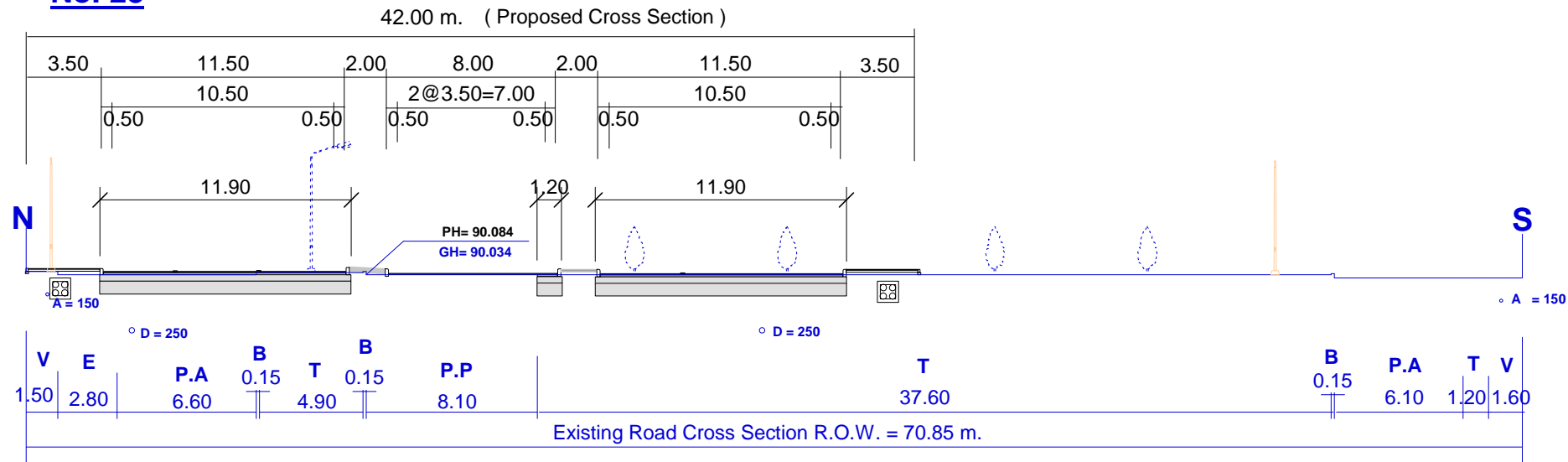
No. 27



Cross Section (Alternative Case Design)

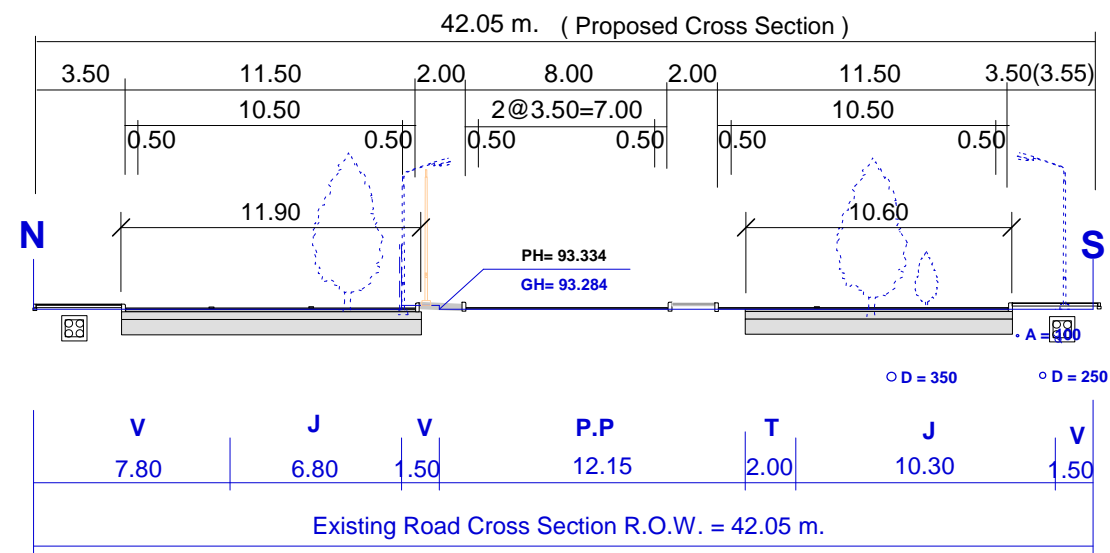
Av. Venezuela - 8 / 9

No. 28

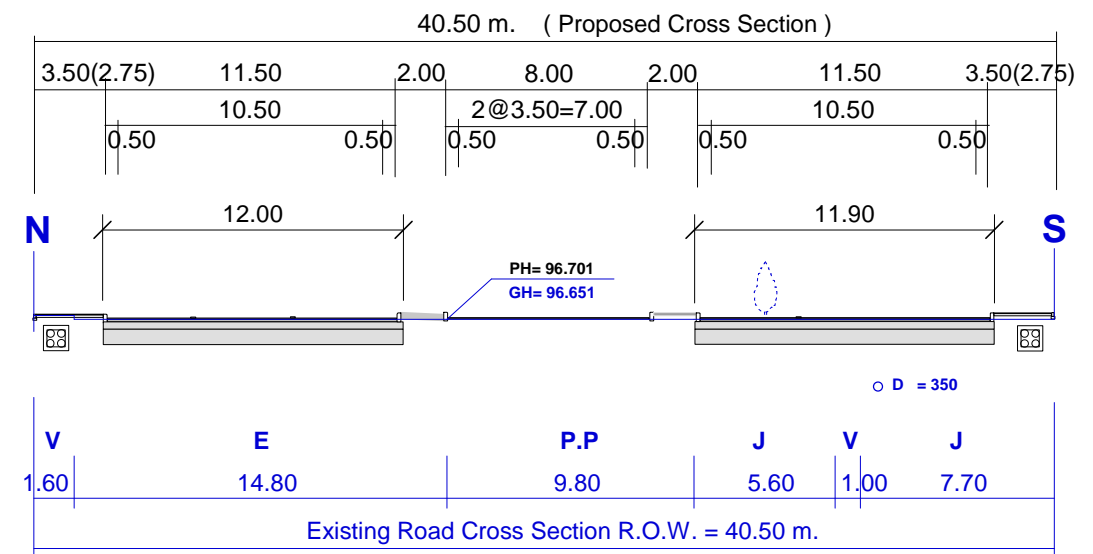


- A : Agua
 - D : Desague
 - G : Gas
-
- V : Vereda
 - P.A : Pista Auxiliar
 - P.P : Pista Principal
 - E : Estacionamiento
 - J : Jard\U+00edn
 - B : Berma
 - T : Tierra

No. 29



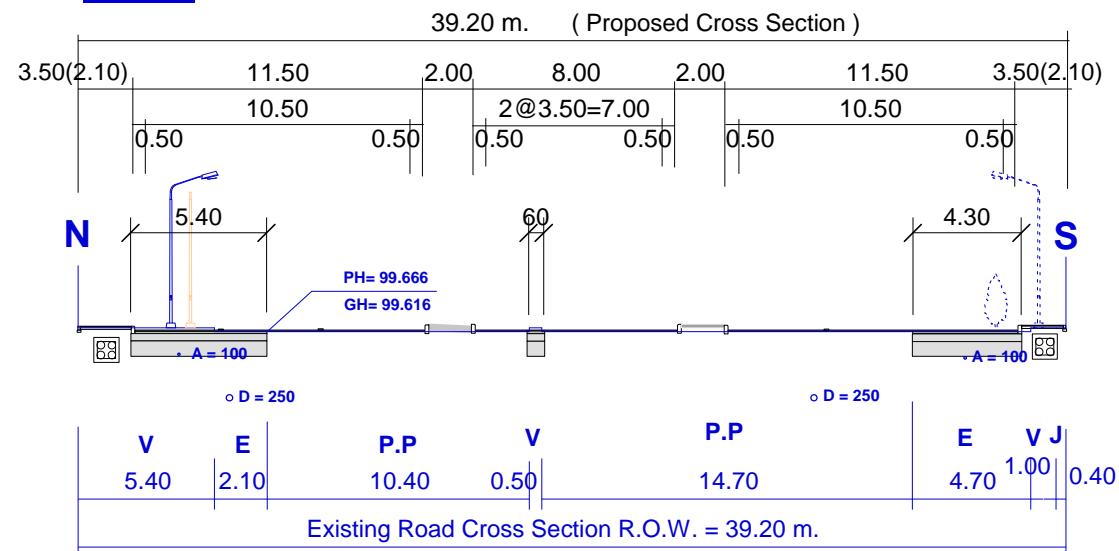
No. 30



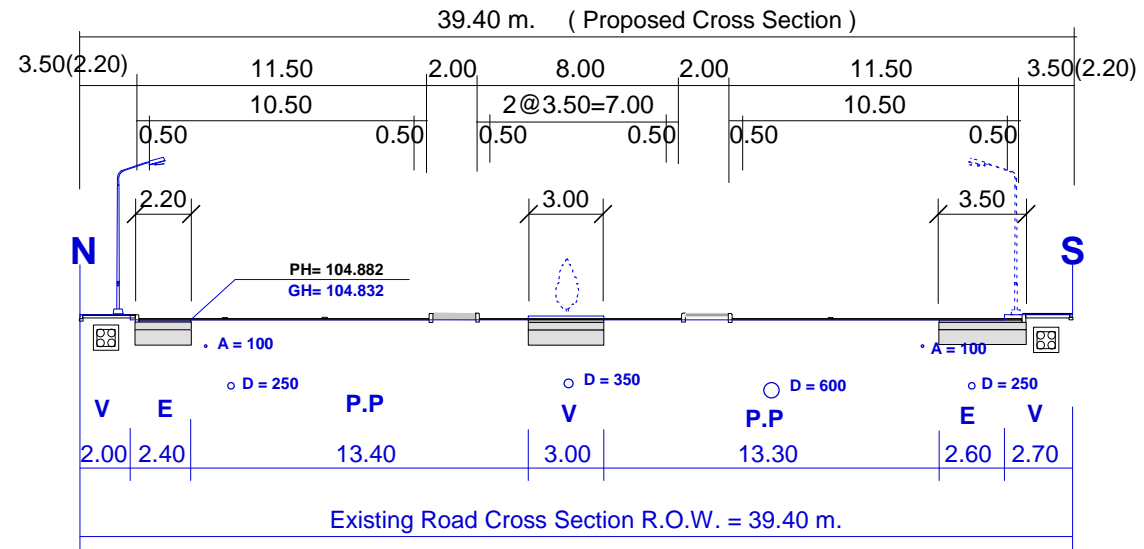
Cross Section (Alternative Case Design)

Av. Venezuela - 9 / 9

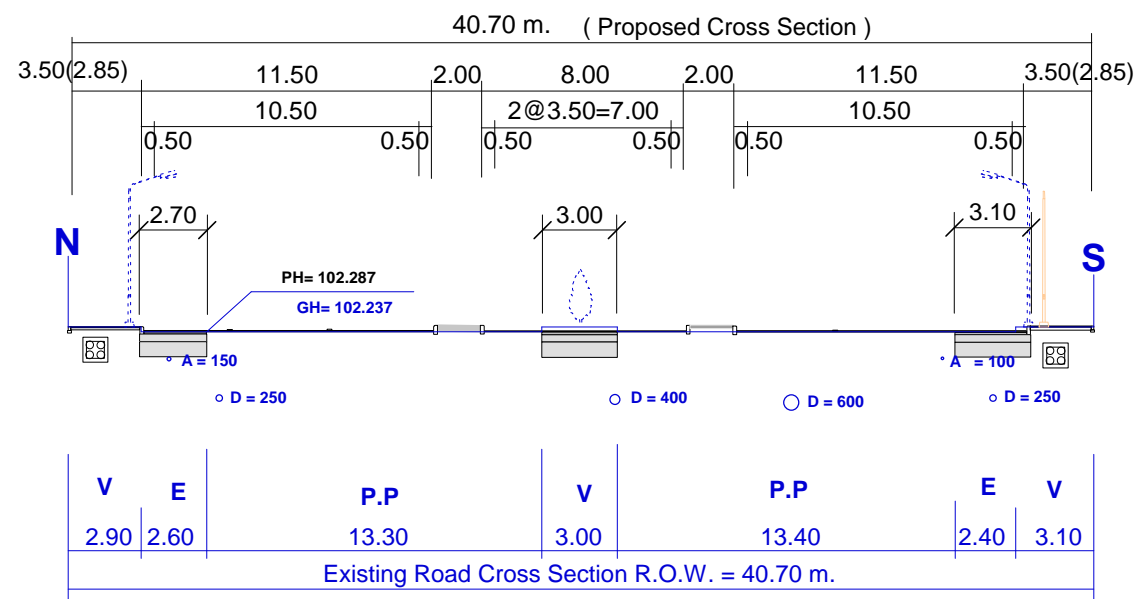
No. 31



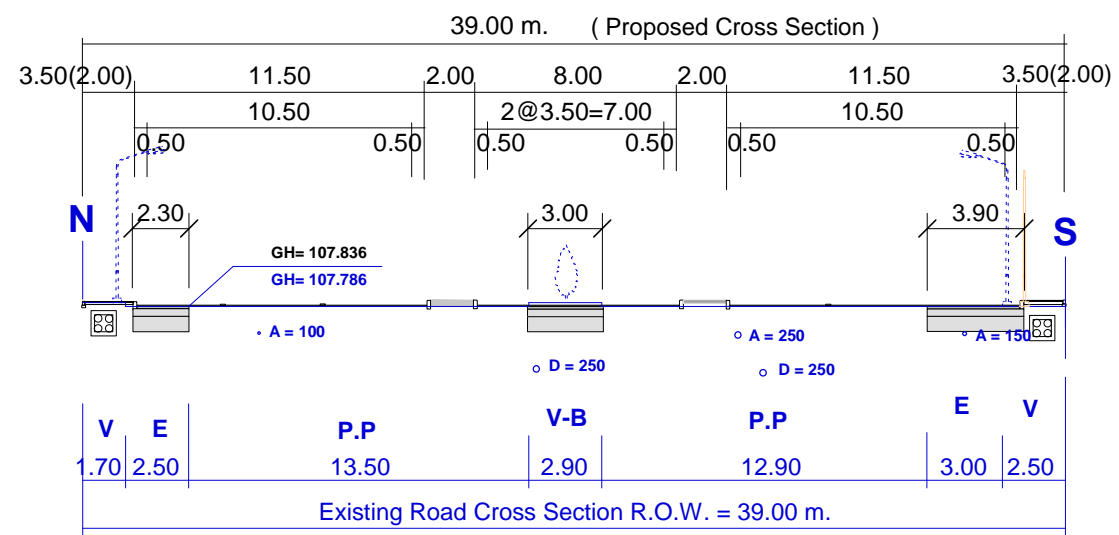
No. 33



No. 32



No. 34



A : Agua
D : Desague
G : Gas

V : Vereda
P.A : Pista Auxiliar
P.P : Pista Principal
E : Estacionamiento
J : JardU+00edn
B : Berma
T : Tierra

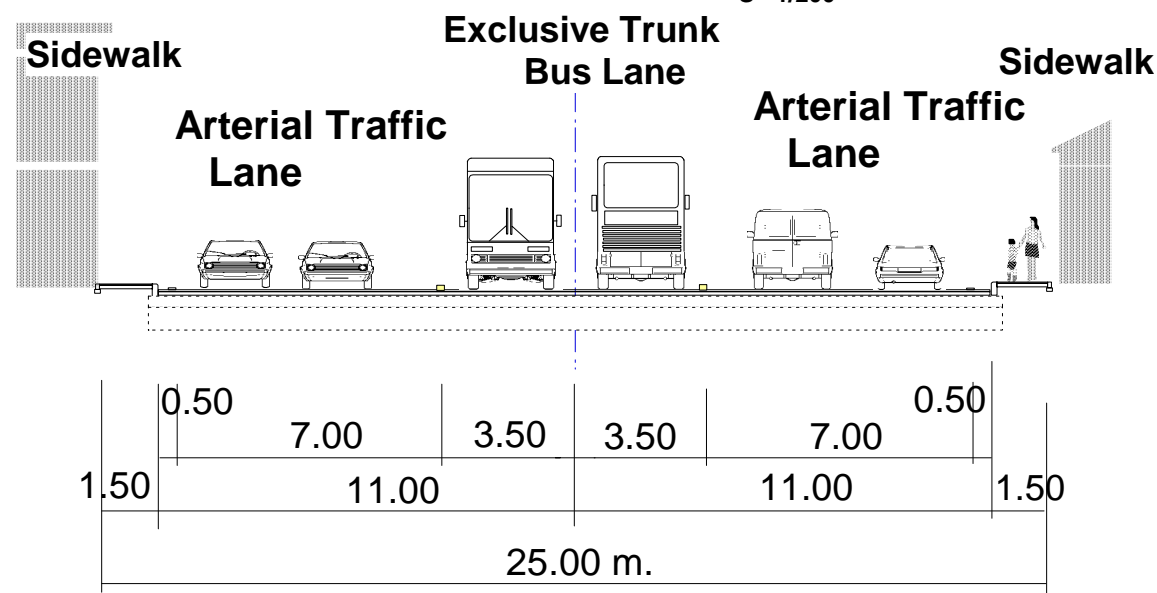
Widening Condition along Huaca Aramburu based on Alternative Case Design



Cross Section Design on Alternative Case Design

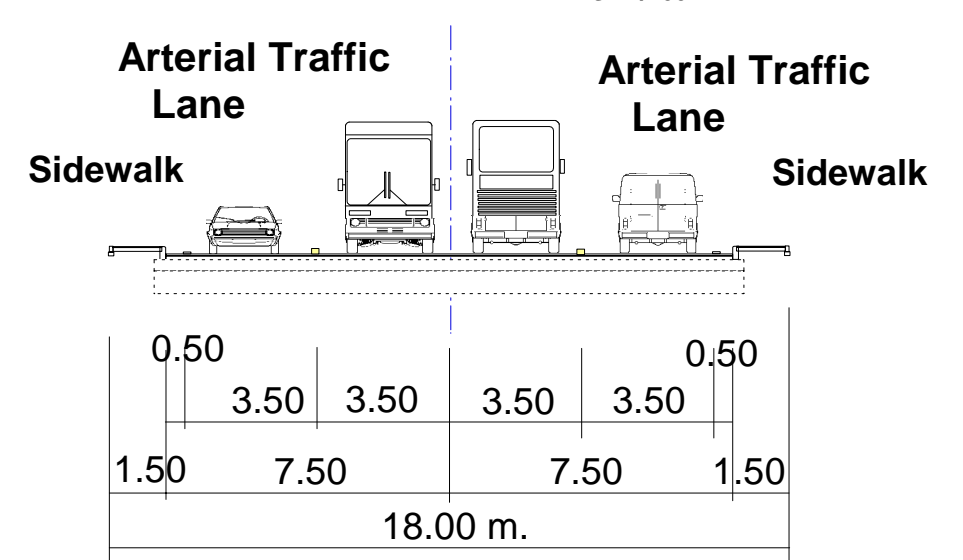
w= 25.0 m. Cross Section

S= 1/200



w= 18.0 m. Cross Section

S= 1/200



Widening Condition along Huaca Aramburu on Av. Venezuela based on Alternative Case Design

TRANSPORT COUNCIL OF LIMA AND CALLAO (CTLC)
MINISTRY OF TRANSPORT AND COMMUNICATION (MTC)

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

FEASIBILITY STUDY ON URBAN TRANSPORTATION IN THE LIMA AND CALLAO METROPOLITAN AREA IN THE REPUBLIC OF PERU

SCALE : Indicated

DWG No.: 80/80