05

Transport Development Strategy

5.1 Introduction

5.1.1. Aims and Objectives

This strategy aims to serve almost all objectives given in Chapter 1 of this plan, but with priority given on the Objectives under Goal 03.
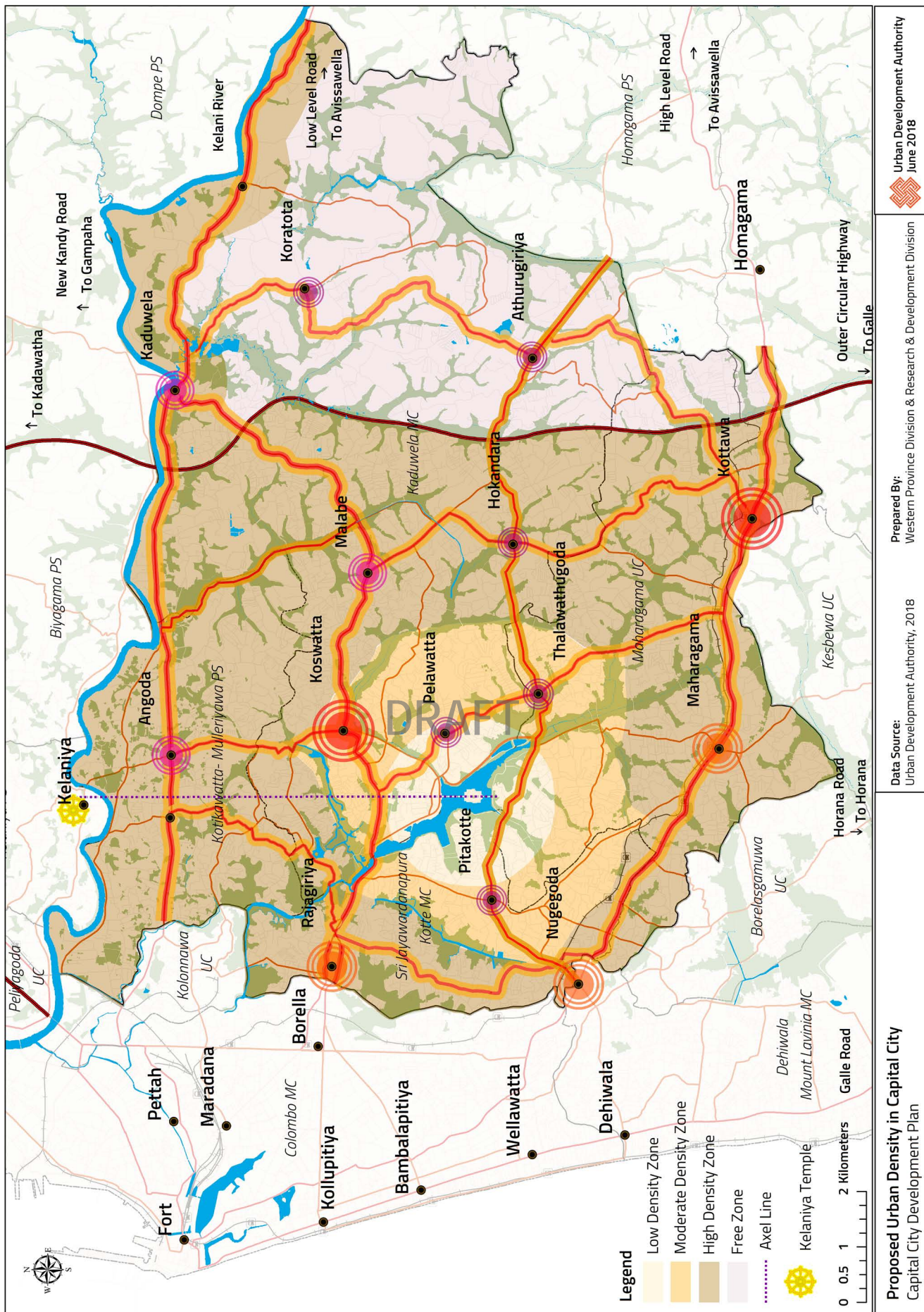
5.1.2. The Approach

In conformity with the goals and objectives of the Capital City Development Plan, The Transportation Development Strategy aims to provide the earmarked planning area with a higher level of inter and intra nodal connectivity, an efficient, economical and comfortable public transportation through appropriate modal integration, congestion and emission free clean passenger and goods transportation, and, safe, pleasant and attractive environment throughout the area. Accordingly, the first target of the plan is to create a transport network which supports the proposed node and corridor development with identified densities as below,

Main Nodes – *Koswaththa - Battaramulla, Kottawa - Makubura, Nugegoda,*
Secondary Nodes – *Maharagama, Rajagiriya*
Tertiary Nodes – *Kaduwela, Malabe, Kotikawaththa - Angoda, Thalawthugoda*
Peripheral Nodes – *Athurugiriya, Korathota, Hokandara, Pelawaththe, Pitakotte*

Apart from the spatial structure development, it is attempted to integrate the wetlands of the Capital City with the new transport network

The second goal of the strategy is to reduce the traffic congestion of the Capital City with a smooth transport network which would lead to enhance the efficiency of the city. The Com Trans data, has reported on New Kandy Road and Low Level Road exceeding the hourly peak capacities and the high traffic congestion throughout the Capital City Area.

Map 5.1: Proposed Urban Density in Capital City
Source: Western Province Division and Research & Development Division, UDA 2018

Chapter 05
**TRANSPORT
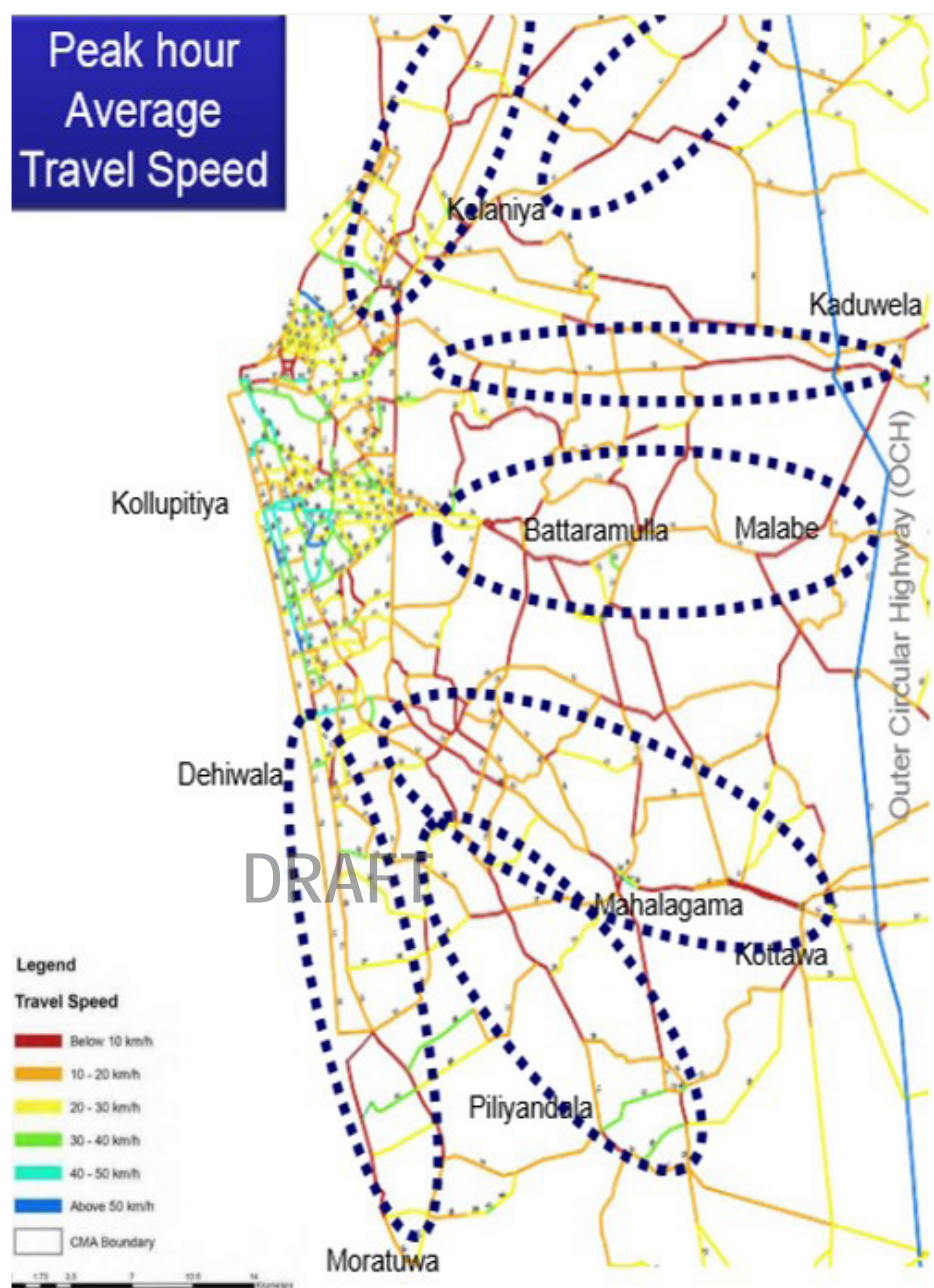DEVELOPMENT
STRATEGY**

Introduction

The Approach

Figure 5.1 Travel Speed within the Colombo
Source: Western Province Division and Research & Development Division, UDA 2018

5.2. Scope of the strategy

1. *The planning framework covered by this strategy includes:*

    a. *Tentative demands for different types of transport modes, estimated based on the projected residential and commuter populations, urban activities and services proposed under other section of this plan, and for specific geographic units within the planning area in different time durations.*

    b. *Specific projects identified to address such demands within the limits of the Urban Development Authority and the other relevant agencies.*

    c. *Locations earmarked and the geographic entities that would be served by such transport developments projects.*

    d. *The order of priorities, the timelines and the proposed process of implementation of such projects.*

2. *However, this strategy addresses general requirements and does not intend to address infrastructure development needs of individual entities, firms or sectors.*

3. *All strategic projects, proposed in this section of the plan are expected to serve the planning area within the time durations specified in Chapter 01 of the Development Plan. Situations beyond these time durations will have to be dealt with timely updating of the Development Plan.*

5.3 Present Status

The predicted population of the Capital City for year 2030 is 1,520,000 which seem to be twice the current population (774,000). On the other hand, the predicted commuter population of the area is 1,950,000 which is approximately twice the current commuter population. For that reason, it is clear the predicted traffic generation will cause a worse traffic congestion in the future with the existing transport facilities.

Predicted Traffic Generation of Different Zones of the Capital City in 2030

Assumptions based on *Eric, J, 2011. Basics of ITE Trip Generation and its Role in Calculating Transportation Impact Fees*. Innovation for better mobility.

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**TRANSPORT
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STRATEGY**

Present Status

ITERIS

Two Independent Impact Fee Studies

Type of Land Use[2]	ITE Code	Daily Trip Generation Rate[3]	Pass-by Percentage[4]	Discounted Impact Fee[5]
General Office (per 1,000 sf)				
< 50,000 sf	710	15.65	0%	$2,204
50,000 – 100,000 sf	710	14.25	0%	$2,006
100,001 – 200,000 sf	710	12.15	0%	$1,711
> 200,000 sf	710	11.37	0%	$1,601
General Retail (per 1,000 sf)				
< 50,000 sf	820	86.56	48%	$6,337
50,000 – 100,000 sf	820	75.10	42%	$6,090
100,001 – 200,000 sf	820	58.92	35%	$5,417
> 200,000 sf	820	53.28	32%	$5,101
Industrial				
General Light Industrial (per 1,000 sf)[7]	110	6.97	0%	$ 981
General Heavy Industrial (per 1,000 sf)[7]	120	1.5	0%	$ 211
Industrial Park (per 1,000 sf)[7]	130	6.96	0%	$ 980
Warehousing (per 1,000 sf)[7]	150	4.96	0%	$ 699
Mini-Warehouse (per 1,000 sf)[7]	151	2.5	0%	$ 352

Existing Traffic Generation based on Land use of the Capital City

	Traffic Generation of Residential Spaces	Traffic Generation of Commercial Spaces	Traffic Generation of Office Spaces	Traffic Generation of Industrial Spaces	Traffic Generation of Other Spaces	Total Traffic Generation of Zones
Executive Residential Zone	51,162	10,022	309	465	798	62,756
Administrative Zone	32,794	4,375	560	138	622	38,489
Commercial Zone	127,136	192,725	1,008	17,588	1,418	339,874
Office Zone	32,441	30,326	482	2,902	465	66,616
Knowledge Zone	71,189	24,913	944	2,340	934	100,321
Transitional Zone	60,353	9,530	64	2,824	318	73,089
Industrial Belt	26,886	10,885	–	7,184	253	45,209
Industrial Zone	40,456	4,603	122	15,202	429	60,813
Residential Zone	71,283	7,865	3,547	509	623	83,828
Total	**513,700**	**295,244**	**7,035**	**49,153**	**5,861**	**870,994**

Table 5.1 Existing Traffic generation based on landuse
Source: Western Province Division and Research & Development Division, UDA 2018

5.4. The Projected situations in 2030 and 2050

Predicted Traffic Generation based on the Land use of the Capital City

Zone	Traffic Generation of Commercial Spaces	Traffic Generation of Office Spaces	Traffic Generation of Industrial Spaces	Traffic Generation of Other Spaces	Traffic Generation of Residential Spaces	Total Traffic Generation of the Zones Per day
Executive Residential Zone	10,022	309	46	798	54,687	65,862
Administrative Zone	43,755	3,260	14	1,244	73,255	121,527
Commercial Zone	192,725	1,008	1,759	1,418	199,750	396,659
Office Zone	30,326	5,058	290	516	192,234	228,424
Knowledge Zone	124,563	1,888	234	4,672	137,209	268,566
Transitional Zone	47,651	128	282	381	89,811	138,254
Industrial Belt	21,770	–	1,437	506	21,479	45,192
Industrial Zone	5,754	153	3,040	528	135,972	145,447
Residential Zone	9,045	3,547	51	717	306,071	319,430
Total	**485,610**	**15,350**	**7,154**	**10,780**	**1,210,467**	**1,729,361**

Table 5.2: Predicted Traffic generation based on land use generation
Source: Western Province Division and Research & Development Division, UDA 2018

Legend

- P 1 Roads
- P 2 Roads
- P 3 Roads
- P 4 Roads
- P 5 Roads
- P 6 Roads
- Inland Water Transport Network
- Recreational Water Transport Network
- Outer Circular Highway
- Elevated Urban Expressway
- Eletrify KV Railway Line
- Railway Stations
- Multi Model Hub
- LRT

0 0.5 1   2 Kilometers

Composite Map

Transport Development Strategy of Capital City Development Plan

Data Source:
Urban Development Authority

Prepared By:
Western Province Division & Research & Development Division

Urban Development Authority
June 2018

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**TRANSPORT
DEVELOPMENT
STRATEGY**

Strategic Interventions

Strategic Intervention 01:
Road Widening

5.5. Strategic Interventions

To accomplish the above mentioned two targets of the transport sector, three strategic interventions are proposed as given below,

Strategic Intervention 01: *Widening of limited number of existing roads and introduce new roads*

Strategic Intervention 02: *Introduce new modes of transportation integrated with the existing ones*

Strategic Intervention 03: *Develop multi-modal transportation exchanges for convenient transit*

5.5.1. Strategic Intervention 01: Road Widening

The purpose of road widening is to improve the level service of the roads in order to cater the future traffic generation of the area. Accordingly, the plan has introduced four types of priority roads as below,

> *P1 – Urban Functional Highways*
> *P2 – Arterial Roads*
> *P3 – Sub Arterial Roads*
> *P4 – Wetland Roads*

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01). P1 – Urban Functional Highways

Three Urban Functional Highways proposed to the Capital City with a width of 30m are as follow,

- *High Level Road*
- *Low Level Road*
- *New Kandy Road*

It is expected to attract the maximum investment to develop the area with a livable character. Most importantly, the mentioned three urban functional highways hold the highest concentration of infrastructure and therefore, within the next ten years of the development plan they will attract the largest concentration of the developments.
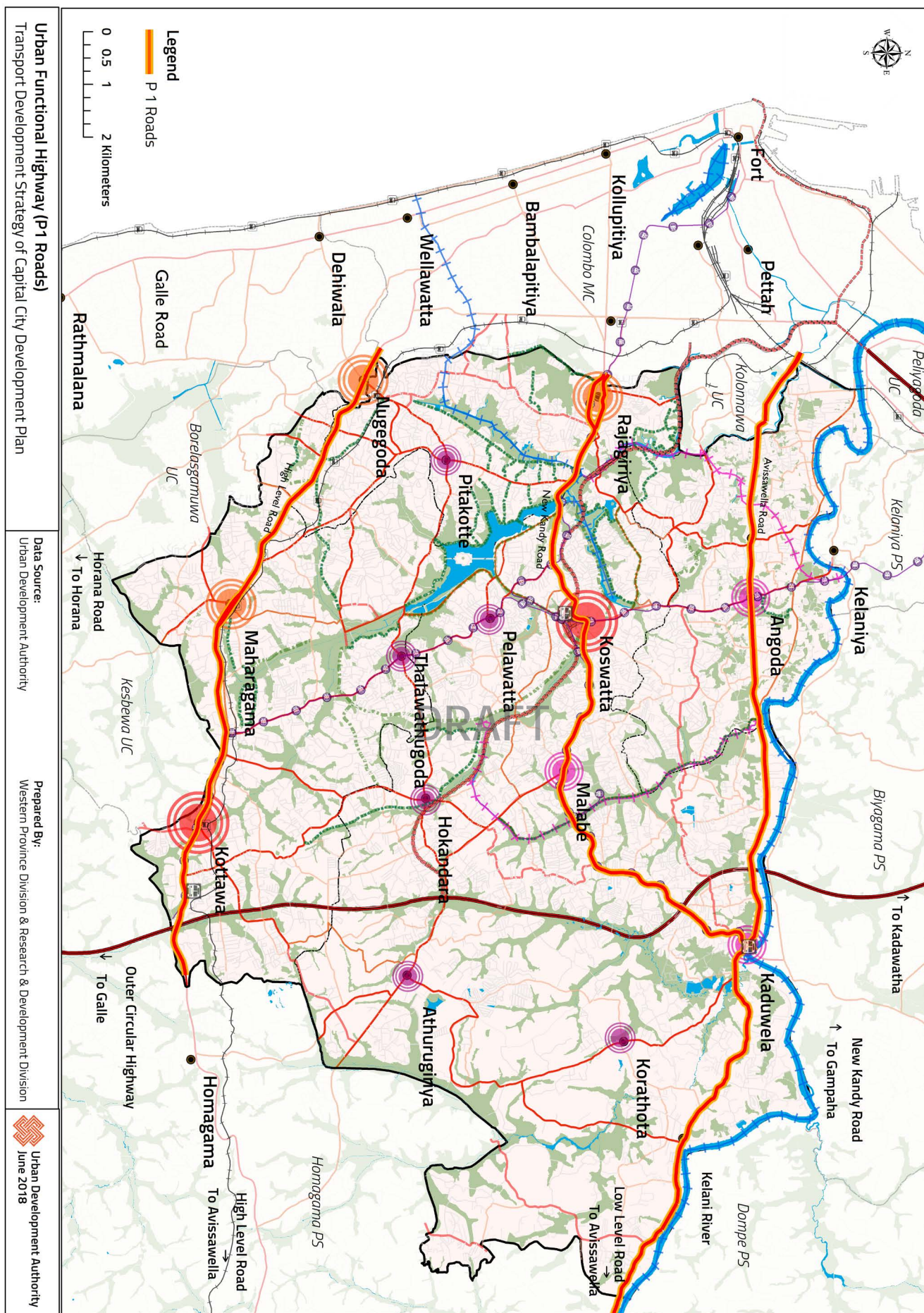
Map 5.3 P1 Category Road Distribution in the Capital City

Source: Western Province Division and Research & Development Division, UDA 2018

Legend

P 1 Roads

0 0.5 1 2 Kilometers

Chapter 05
TRANSPORT DEVELOPMENT STRATEGY

Strategic Interventions

Strategic Intervention 01:
Road Widening

Figure 5.2: Cross Section of P1 Road Catogery
Source: Western Province Division and Research & Development Division, UDA 2018

Figure 5.3: Cross Section of P2 Road Catogery
Source: Western Province Division and Research & Development Division, UDA 2018

Legend

P 2 Roads

0 0.5 1 2 Kilometers

DRAFT

Data Source:
Urban Development Authority

Prepared By:
Western Province Division & Research & Development Division

Urban Development Authority
June 2018

Rathmalana

Galle Road

Dehiwala

Wellawatta

Bambalapitiya

Kollupitiya

Fort

Pettah

Colombo MC

Kolonnawa UC

Peliyagoda UC

Kelaniya PS

Kelaniya

Nawala Rd

New Kolonnawa Rd

Pepiliyana Rd

Nugegoda

Pitakotte

Kotte Rd

Rajagiriya

Old Kotwal Rd

Thalapathpitiya Rd

Parliament Rd

Buthgamuwa Rd

Koswatta - Kelanimulla Rd

Koswatta

Angoda

Biyagama PS

Horana Road
↓ To Horana

Piliyandala-Maharagama Rd

Hospital Rd

Maharagama

Kottawa Batoramulla Rd

Thalawathugoda

Pelawatta

Malabe

Malabe - Athurugiriya Rd

Kesbewa UC

Borelasgamuwa UC

Kottawa-Horana Rd

Kottawa

Maldbe-Kadawal Rd

Hokandara

Kahanthota Rd

To Kadawatha

New Kandy Road
↓ To Gampaha

Outer Circular Highway
↓ To Galle

Athurugiriya-Kottawa Rd

Athuruginya

Kaduwela Athuruririya Rd

Korathota

Low Level Road
To Avissawella

Kaduwela

Kelani River

Dompe PS

Homagama

Homagama PS

High Level Road
↓ To Avissawella

Panagoda-Ambulgama Rd

Habarakada-Ranala Rd

Map 5.4 P2 Catogery Road Distribution in the Capital City
Source: Western Province Division and Research & Development Division, UDA 2018

02). P2 – Arterial Roads

An arterial network is developed to facilitate the movement between Urban Functional Highways in the Capital City i.e. Citadel area, Commercial Strip, Administrative District, Residential District and Periphery. It is expected that; this development would create a grid pattern transport network within the area.

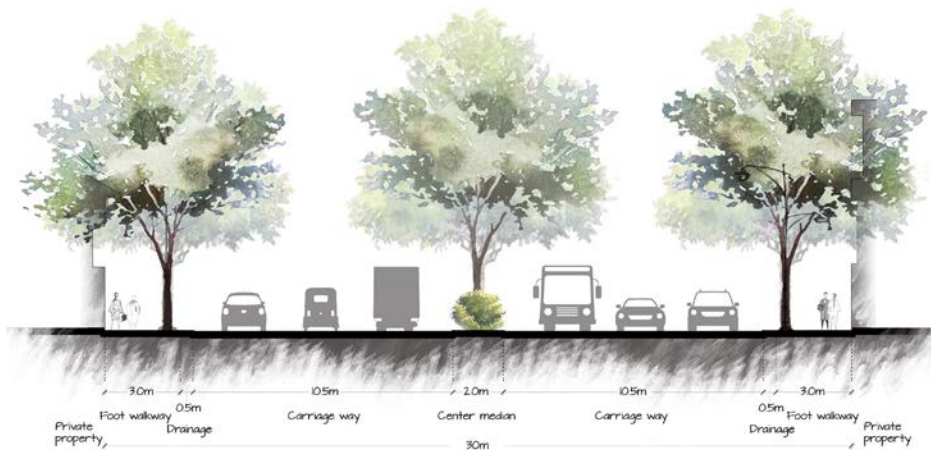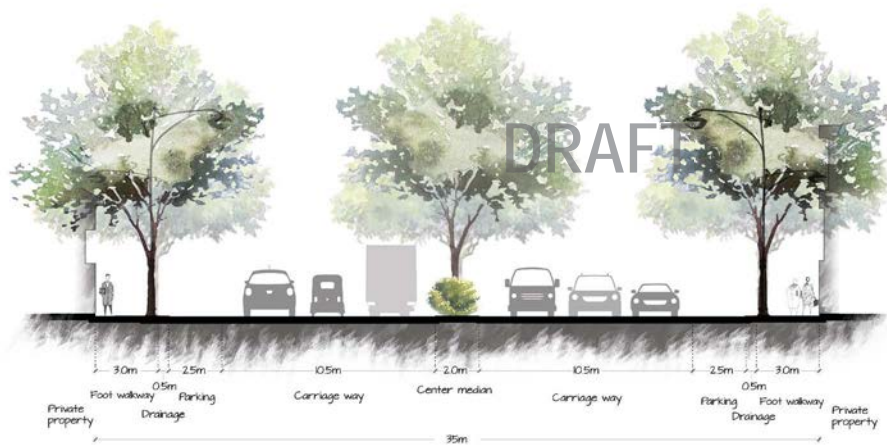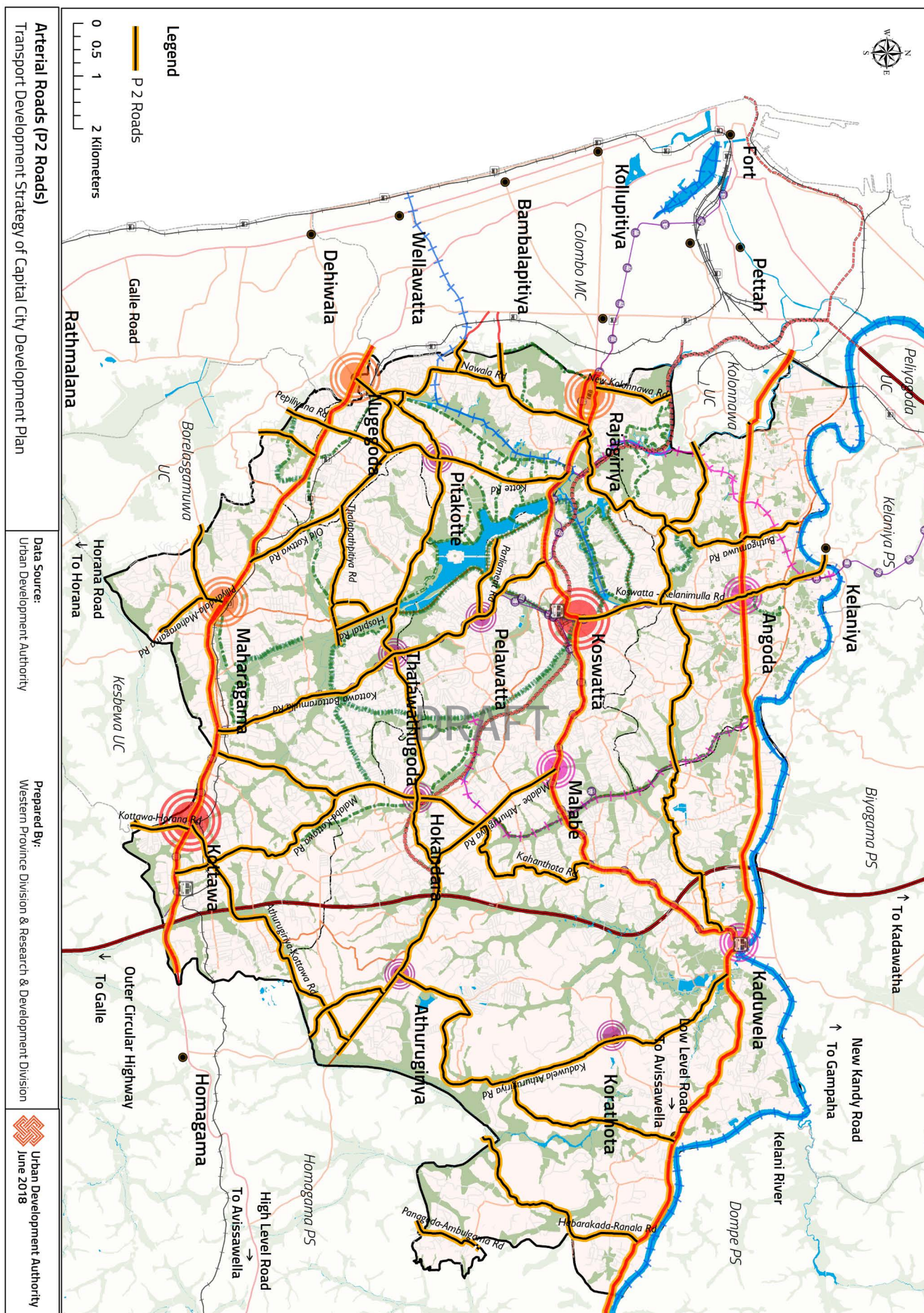**Figure 5.4:** Cross Section of P3 Road Catogery
Source: Western Province Division and Research & Development Division, UDA 2018

Apparently, the proposed widths of the Arterial roads are,

Lane	= 3.5m*4
Paving Pedestrian Path ?	= 1.8m * 2,
Drainage	= 0.5m * 2
Tree line	= 1m * 2

Map 5.5 P3 Catogery Road Distribution in the Capital City

Source: Western Province Division and Research & Development Division, UDA 2018

Sub Arterial Roads (P3 Roads)
Transport Development Strategy of Capital City Development Plan

Legend

P 3 Roads

0 0.5 1   2 Kilometers

Data Source:
Urban Development Authority

Prepared By:
Western Province Division & Research & Development Division

Urban Development Authority
June 2018

03). P3 – Sub Arterial Roads

Sub-Arterial Road network is the traffic feeder at the neighborhood level. Hence, access to developments is to reach through the collector roads. Further, the neighborhood and Arterial Roads are connected to the Sub Arterial Road Network.
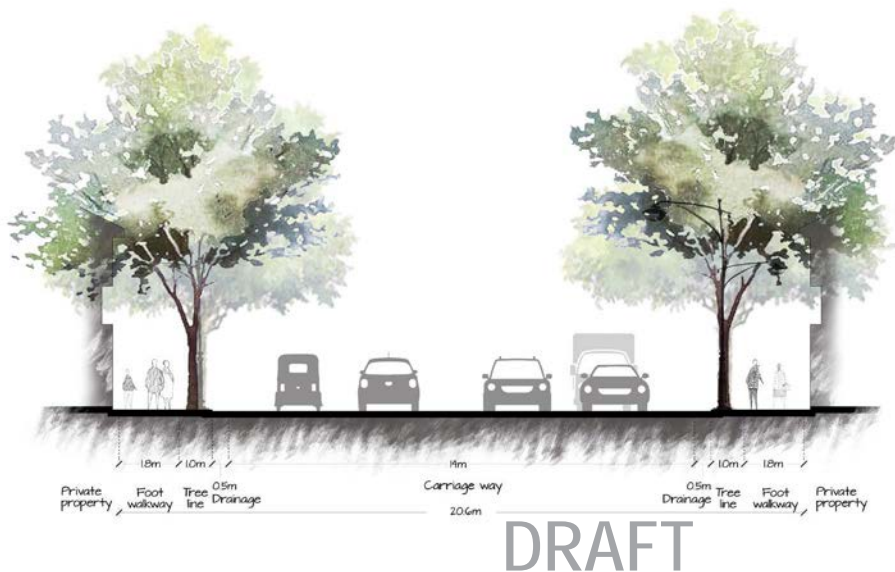
Figure 5.5: Cross Section of P4 Road Catogery
Source: Western Province Division and Research & Development Division, UDA 2018

P3 Roads need to be arranged according to the following design Guidelines.

Lane	= 3.5m*2,
Paving	= 1.8m*2,
Drainage	= 0.5m *2,
Tree line	= 1m *2
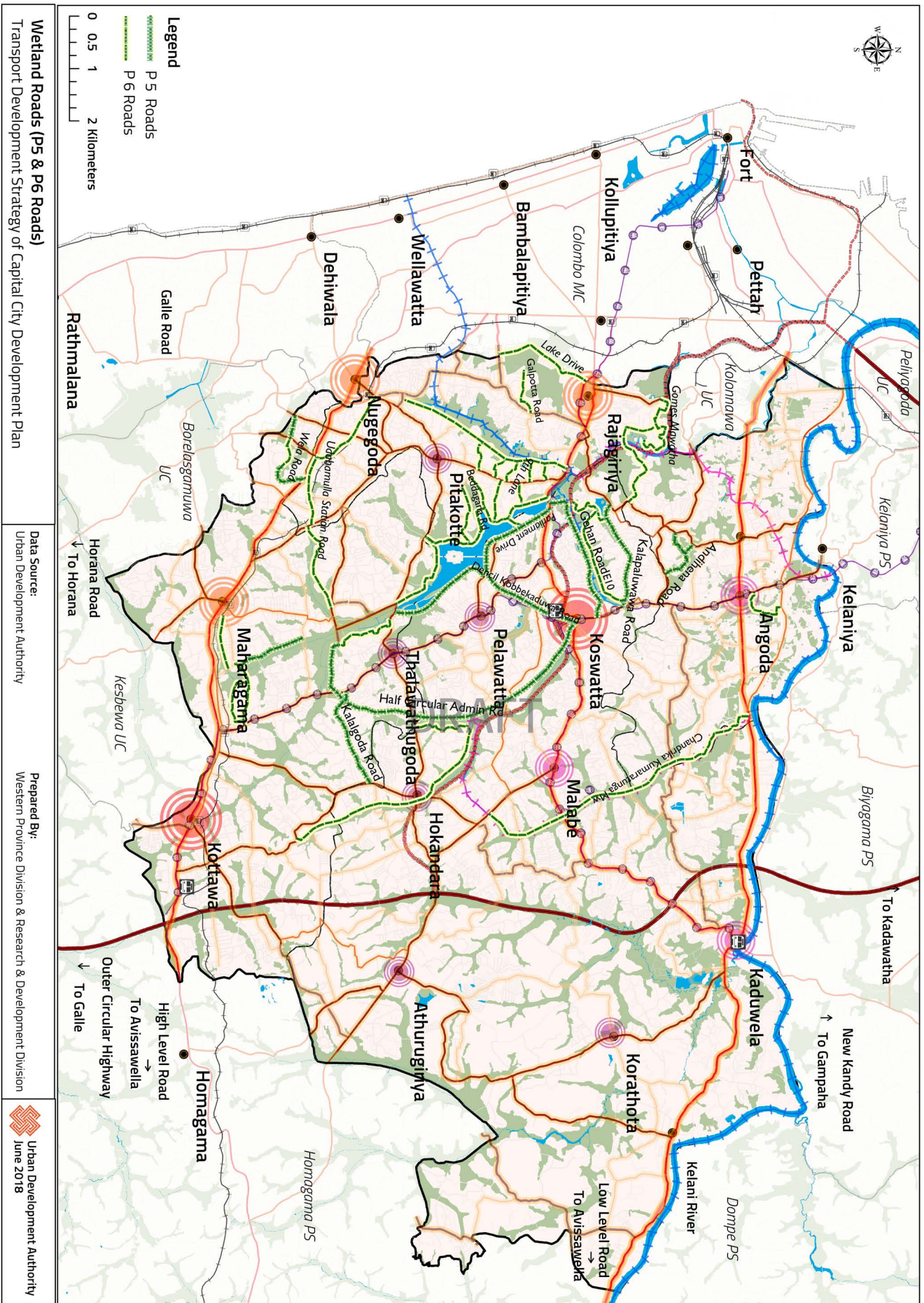
Map 5.6 Wetland Road Catogery Distribution
Source: Western Province Division and Research & Development Division, UDA 2018

04). P4 & P5 – Wetland Roads

The main intention of proposed wetland roads is to expose the wetlands of the Capital City to the public. Such exposure will enable to preserve them from encroachments and will bring in a pleasant drive/walk to the users of the road. Accordingly, it is planned to open up more than 30% of the available wetlands. Three (may be two) categories of Wetland Roads are proposed for the area. They are,

- *Limited Access (One lane) Wetland Road*
- *Connecting (Two lane) Wetland Roads*

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**TRANSPORT
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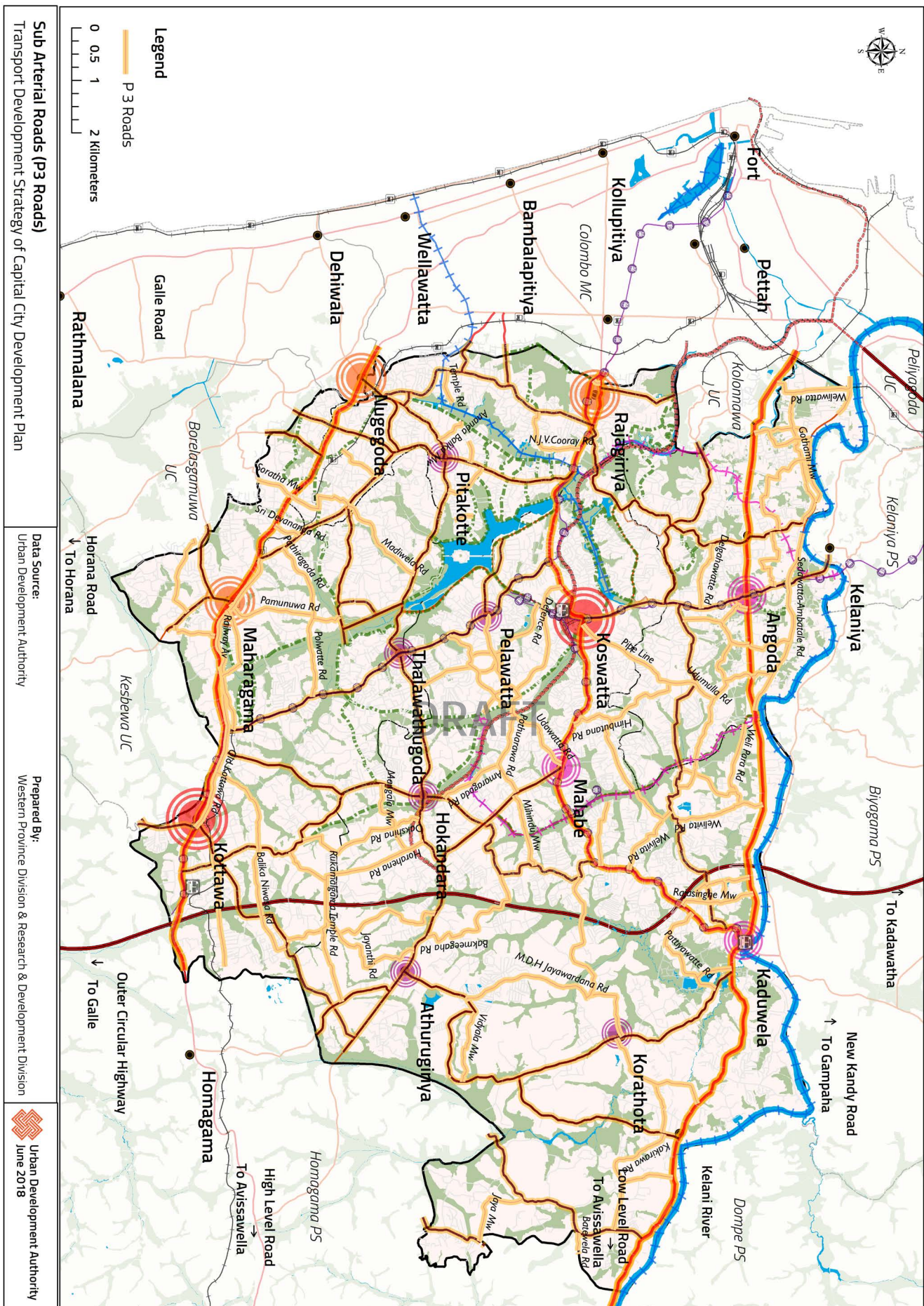**Strategic Interventions**

Strategic Intervention 01:
Road Widening
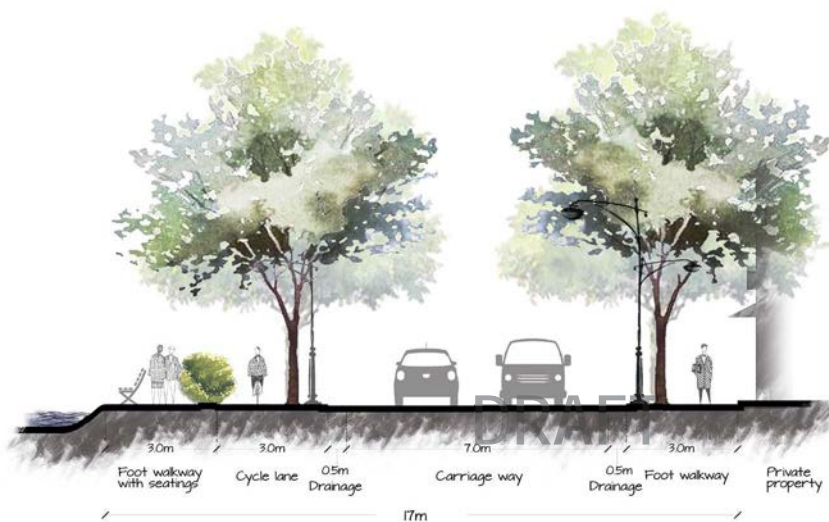
Figure 5.6: Cross Section of P5 Road Catogery
Source: Western Province Division and Research & Development Division, UDA 2018
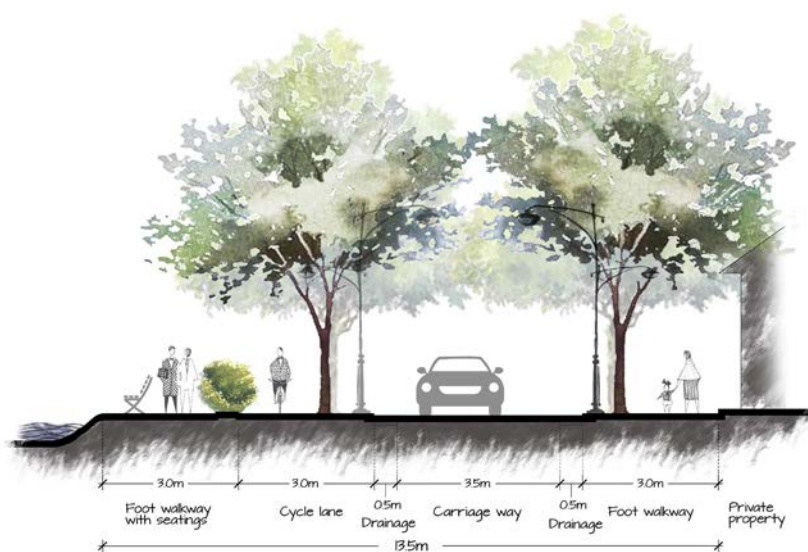
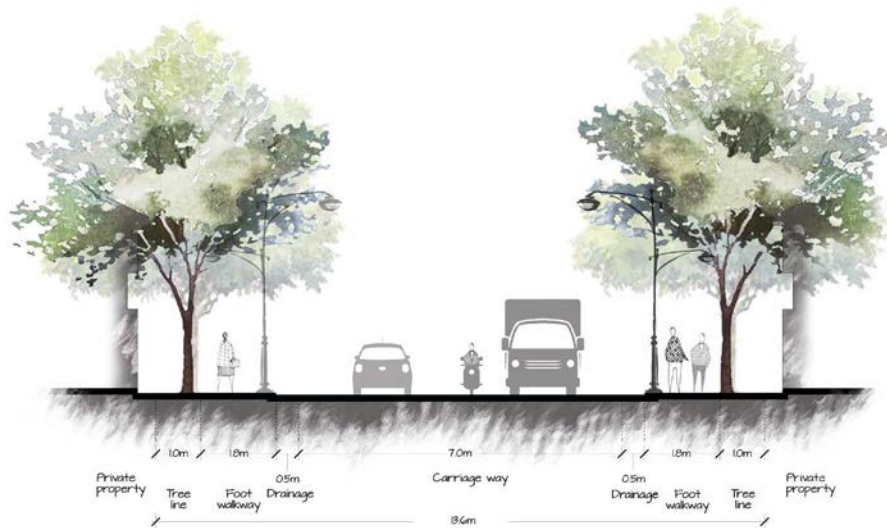**Figure 5.7:** Cross Section of P6 Road Catogery
Source: Western Province Division and Research & Development Division, UDA 2018

5.5.2. Strategic Intervention 02: Introducing New Transport Modes

According to the outcomes of STRDA model, it is assumed to be a difficult task to manage the vehicle volume of the area only with the road widening proposal. Further, it is anticipated to create a different situation as a result of the new integration created in the nodes and corridors. Hence, it is required to introduce a new mode of public transport to decrease the private vehicle attraction towards the Capital City. Accordingly, below projects are proposed to accomplish this situation.

- *Light Rail Transit*
- *Elevated Highway*
- *Electrified Railway*
- *Water Transport Network*

Light Rail Transit:

The importance of introducing LRT is recognized by Japan International Corporation Agency (JICA) and Ministry of Megapolis to avoid the ground level traffic congestion of the Colombo district. Accordingly, two LRT lines are proposed by the mentioned agencies as below,

- *JICA has proposed the LRT line from Malabe to Pettah and Malabe to Kaduwela*
- *Megapolis has proposed the LRT line from Hunupitiya to Kottawa*

The expected delivery capacity of the proposal is as below,

Classification	Length	Daily Passengers		PPHPFD
		Passengers	Passengers/km	
Megapolis	23.2	456,262	19,666	10477
JICA	15.7	498,000	31,720	19800

Table 5.3 Predicted Daily Passengers
Source: (young & cecb, 2018)

Along with the new transport proposal, it is assumed to result a proper traffic diversion. Further, it is planned to release land for development within the identified station as follow.

Legend

- LRT Package 1 (33.0 km)
- LRT Package 2 (28.3 km)
- LRT Package 3 (22.3 km)
- JICA Line
- Elavated Urban Expressway
- Polduwa Road

0 0.5 1 2 Kilometers

Proposed Western Region Light Rail Transit System
Capital City Development Plan

Data Source:
Ministry of Megapolis & Western Development
& JICA Project, 2018

Prepared By:
Western Province Division & Research & Development Division

Urban Development Authority
June 2018

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Map 5.7: Map Of Light Rail Transit System
Source: Western Province Division and Research & Development Division, UDA 2018

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Strategic Interventions

Strategic Intervention 02: Introducing New Transport Modes

Elevated Highway:

Elevated Highway introduced by the Ministry of Megapolis creates a new link from New Kelani River Bridge to Athurugirya via Rajagiriya. It will facilitate a strong link between Colombo and key suburban town. According to the secretary of Ministry of Megapolis, the project has set access points at Koswatta, Malabe and Rajagiriya in the Capital City (Wickremasekara, 2016).

Phase I : NKB To Rajagiriya	
Total Length	6.9km
Total Ramp Length	3.6km
Nominal Width of the Carriageway	25.4m
No of Lanes	4
Lane width	3.5m

Phase II: Rajagiriya to Athurugiriya	
Total Length	10.4km
Nominal Width of the Carriageway	25.4km
No of Lanes	4
Lane Width	3.5m

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Table 5.4.Details of Elevated Highway
Source: www.mohsl.gov.lk/web/images/stories/project
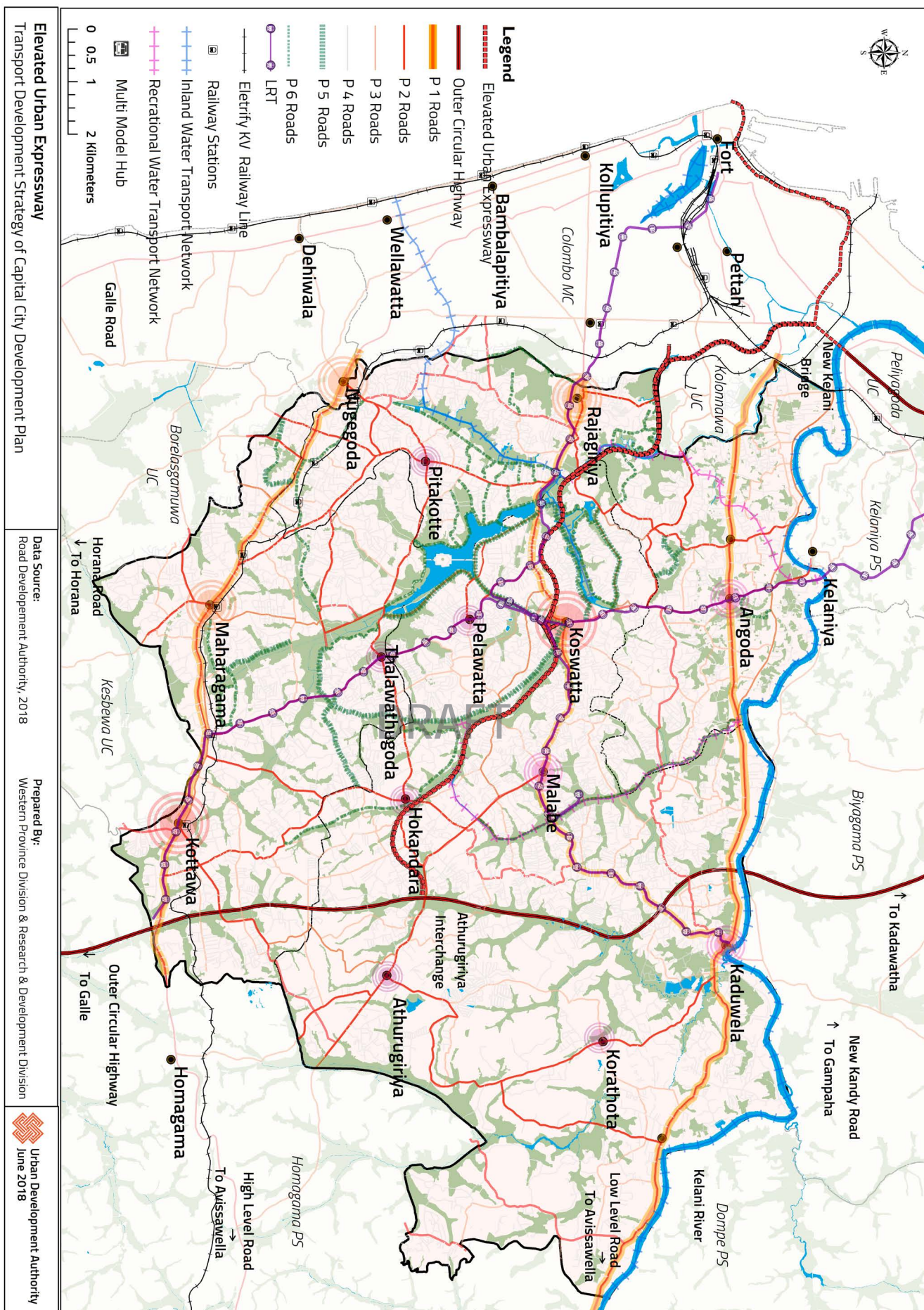
Map 5.8: Elevated Urban express
Source: Western Province Division and Research & Development Division, UDA 2018

Legend

- Elevated Urban Expressway
- Outer Circular Highway
- P 1 Roads
- P 2 Roads
- P 3 Roads
- P 4 Roads
- P 5 Roads
- P 6 Roads
- LRT
- Eletrify KV Railway Line
- Railway Stations
- Inland Water Transport Network
- Recreational Water Transport Network
- Multi Model Hub

0 0.5 1 2 Kilometers

Elevated Urban Expressway
Transport Development Strategy of Capital City Development Plan

Data Source:
Road Development Authority, 2018

Prepared By:
Western Province Division & Research & Development Division

Urban Development Authority
June 2018

Fort
Kollupitiya
Pettah
Bambalapitiya
Wellawatta
Dehiwala
Galle Road
Colombo MC
New Kelani Bridge
Kolonnawa UC
Peliyagoda UC
Kelaniya PS
Kelaniya
Angoda
Nugegoda
Rajagiriya
Pitakotte
Koswatta
Pelawatta
Thalawathugoda
Malabe
Maharagama
Borelasgamuwa UC
Kesbewa UC
Horana Road
To Horana
Kottawa
Hokandara
Athurugiriya Interchange
Athurugiriya
Homagama
Outer Circular Highway
To Galle
To Avissawella
High Level Road
Homagama PS
Korathota
Low Level Road
To Avissawella
Kaduwela
Kelani River
Dompe PS
Biyagama PS
New Kandy Road
To Gampaha
To Kadawatha

DRAFT

Electrified Railway:

Ministry of Megapolis proposed to electrify the Kelani Vallley line (60Km) to enhance the railway facilities within Colombo district.

5.5.3. Strategic Intervention 3: Multi Model Hub Development

The intention of Multi Model Hub is to achieve the maximum utility for the development through integration of different transport modes. Accordingly, three multi model hubs for the Capital City are identified as follows,

- *Kottawa*
- *Koswatta*
- *Kaduwela*

Kottawa Multi Model Hub
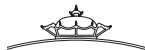
Kottawa Multi Model hub is an ongoing project which is incorporated to the Capital City Development Plan. It is initiated within a total area of 1874 perches by the Township Development Component of Greater Colombo Urban Transport Development Component under the Ministry of Megapolis and Western Development.

No	Land use	Land Area (Perch)
1	Institutional	88.5
2	Institutional	162.6
3	Park and Ride	120.2
4	Extension of Bus Terminal	49.1
5	Bus Terminal and Public Square	168.5
6	Commercial	227.4
7	Commercial	181.6
8	Commercial	131.9
9	Leisure	57.7
10	Mix Development	232.5
11	Mix Development	420.7
12	Railway Station	34.0

Table 5.5 MAKUBURA TRANSIT ORIENT DEVELOPMENT LAND USE COMPOSITION
Source: western Province Division, UDA 2018

Legend

Intergration Value
- -1.000000 - 0.909253
- 0.909254 - 1.241593
- 1.241594 - 1.551724
- 1.551725 - 2.000000
- 2.000001 - 2.500000
- 2.500001 - 3.714285

- Multi Model Transport Hub
- LRT
- Elavated Urban Expressway
- Inland Water Transport Network

0   0.5   1   2 Kilometers

Multi Model Transport Hubs
Capital City Development Plan

Data Source:
Urban Development Authority, 2018

Prepared By:
Western Province Division & Research & Development Division

Urban Development Authority
June 2018

Fort
Kollupitiya
Pettah
Colombo MC
Bambalapitiya
Wellawatta
Dehiwala
Rathmalana
Nugegoda
Pitakotte
Rajagiriya
Kolonnawa UC
Peliyagoda UC
Kelaniya
Kelaniya PS
Biyagama PS
Angoda
Koswatta
Malabe
Pelawatta
Thalawathugoda
Maharagama
Hokandara
Kottawa
Athurugiriya
Korathota
Kaduwela
Homagama
Homagama PS
Dompe PS
Borelasgamuwa UC
Kesbewa UC

Horana Road
← To Horana

Galle Road

Outer Circular Highway
↓ To Galle

High Level Road
To Avissawella

New Kandy Road
↑ To Gampaha

→ To Kadawatha

Map 5.9: Locations of Multi Model Transport Hubs in Capital City
Source: Western Province Division and Research & Development Division, UDA 2018

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Strategic Interventions

Strategic Intervention
3: Multi Model Hub
Development
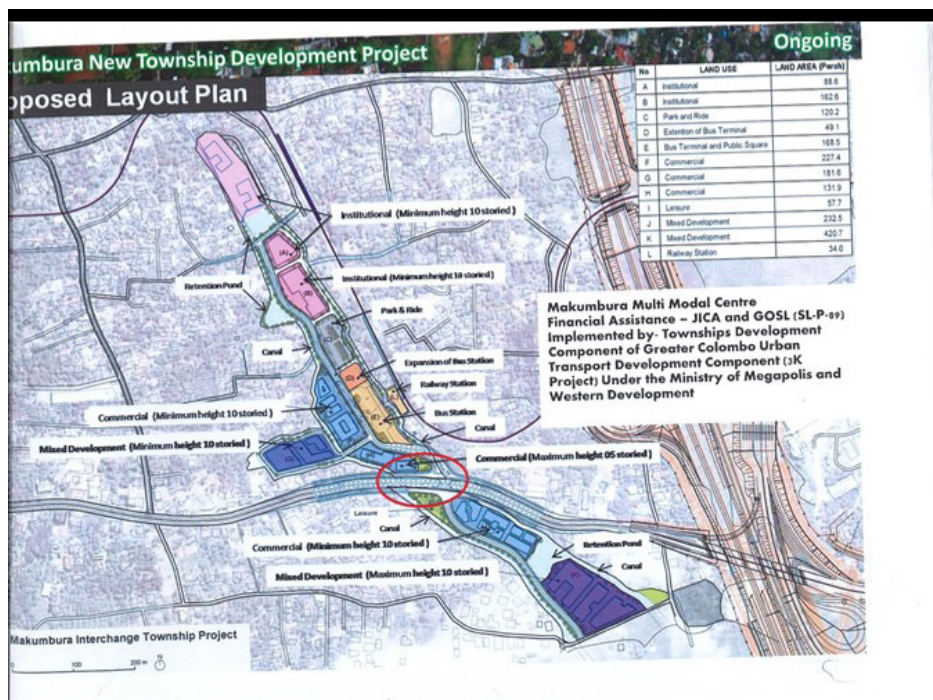
Figure 5.8 Makubura Transit Orient Development
Source: western Province Division , UDA 2018

Koswatta Multi Model Hub

The three types of transport mode; Roads, LRT (JICA and Megapolis), and Elevated Highway meet at the Koswatta Junction. Hence, a land of 6 acres is proposed for the development similar to the land use of Kottawa Multi Model Hub. The initiative of developing Koswatta as a first priority node of the Capital City is a preferred as a major strategy

Figure 5.9 Layout of Koswatta Multimodal Hub
Source: Western Province Division and Research & Development Division, UDA 2018

Kaduwela

Kaduwela similarly holds a prominent recognition for a Multi Model Hub as it is located in close proximity to the Express Highway. This potential enhances the proposed development of LRT by JICA. A park and ride system is also added to the Kaduwela Multi Model Hub.

5.6 Impacts of Road Widening Proposal of Transport Strategy

1.   **Public Transport Passenger Volume of 2035**

Map 5.10: Public Transport Passenger Volumen in 2035
Source: Colombo Master Plan, Urban Development Authority
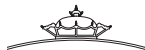
Chapter 05
TRANSPORT DEVELOPMENT STRATEGY

Impacts of Road Widening Proposal of Transport Strategy

The STRDA model prediction on road widening proposal depicts that the highest traffic demand generation of the area arise in the High-level and New Kandy Road of the Capital City. According to the current Com Trans Data, the highest volume of passenger flow is recorded from the N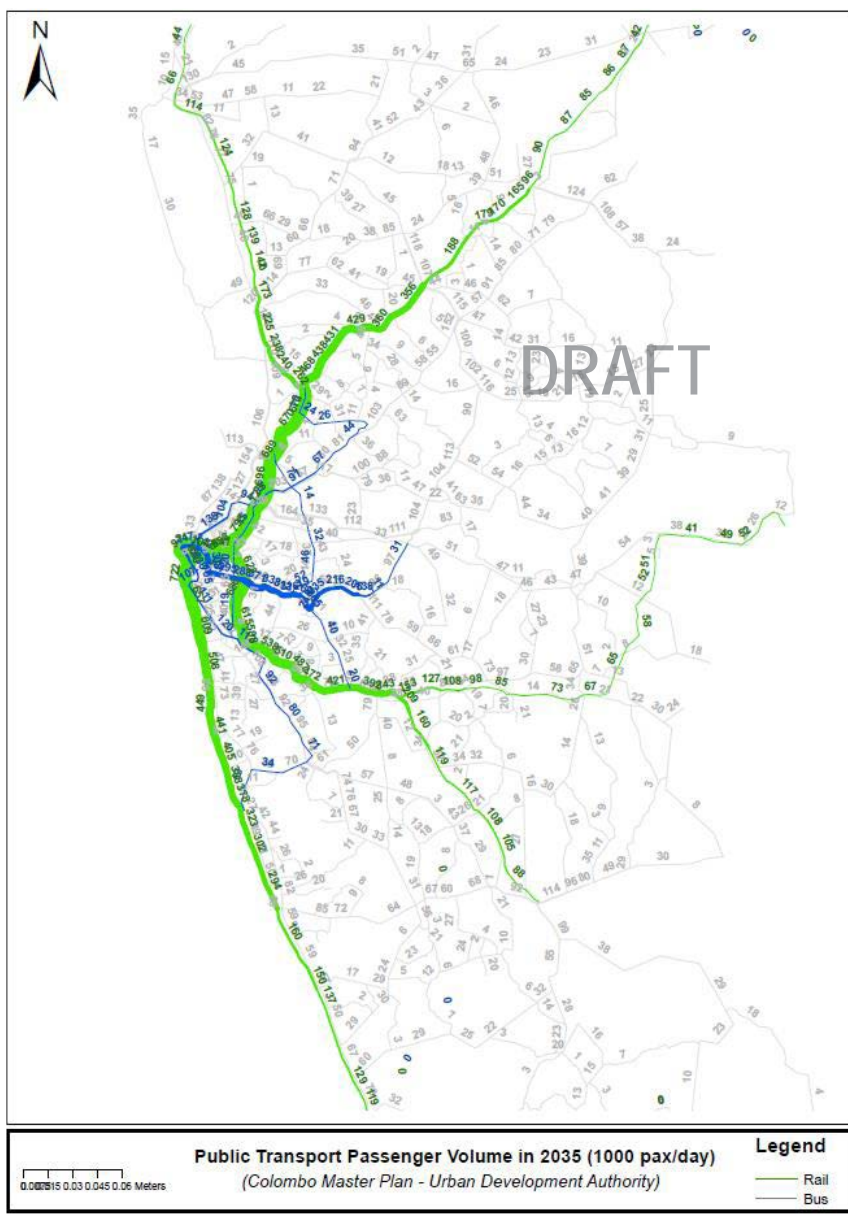ew Kandy Road. However, according to the new prediction for the year 2035, the highest passenger flow generation is recorded from the High-Level. It is reasonable as the land use plan of Capital City is proposed to be implemented along the Commercial Strip.

2. **Volume Capacity Ratio and Traffic Volume of 2035**

The v/c ratio, also referred to as degree of saturation, represents the sufficiency of an intersection to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicates that adequate capacity is available and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur. Once the demand exceeds the capacity (a v/c ratio greater than 1.0), traffic flow is unstable and excessive delay and queuing is expected. Under these conditions, vehicles may require more than one signal cycle to pass through the intersection (known as a cycle failure). For design purposes, a v/c ratio between 0.85 and 0.95 generally is used for the peak hour of the horizon year (generally 20 years out). Overdesigning for an intersection should be avoided due to negative impacts to pedestrians associated with wider street crossings, the potential for speeding, land use impacts, and cost" (Transportation, 2004). According to STRDA model prediction of V/C ratio, approximately more than 90% of roads are expected to exceed capacity of roads even with the new road improvements. Hence, it is essential to improve public transport mode of the area parallel to road widening

Legend

VC Ratio
— 0 - 1
— 1 - 1.5
— 1.5 - 2
— 2 -

PCUs per Day
— 0 - 15000
— 15000 - 30000
— 30000 - 45000
— 45000 - 60000
— 60000 - 75000
— 75000 - 90000
— 90000 - 105000
— 105000 - 120000
— 120000 - 135000
— 135000 - 150000
— 150000 - 300000

Volume Capacity Ratio and Traffic Volume (2035)
UDA Colombo Master Plan

Map 5.11: Volume Capacity Ration and Traffic Volume 2035
Source: UDA Colombo Master Plan
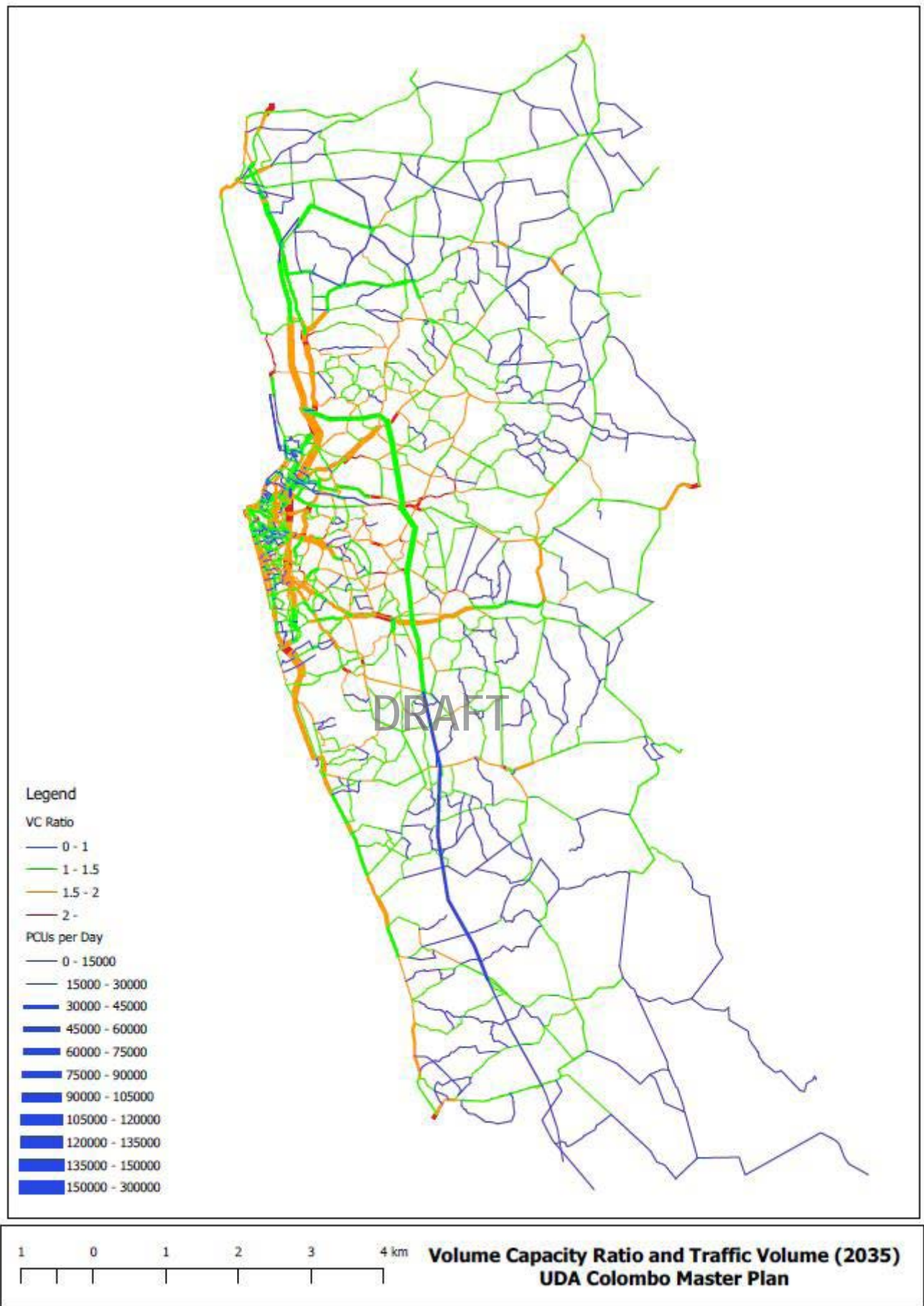
Chapter 05
TRANSPORT DEVELOPMENT STRATEGY

Impacts of Road Widening Proposal of Transport Strategy

3. Road widening and Integration

Even though it is difficult to cater the rapid generation of traffic condition only through the road widening proposal, it is able to achieve the proposed spatial form of the Capital City. The level of integration before and after the new road widening verifies clearly that it is highly supportive on the proposed nodes and corridor development.

As a result of the road development, the level of integration of nodes are assumed to be improved as below,

Priority levels of Node	Node	Existing Level of Integration	Future Level of Integration
First	Koswatta-Battarmulla	2 -2.5	2.5-3.7
	Kottawa- Makubura		
Second	Maharagama	2 -2.5	2.5-3.7
	Nugegoda		
	Rajagiriya		
Third	Kaduwela	1.2-1.5	2-2.5
	Malabe	2 -2.5	2.5-3.7
	Kotikawaththa-Angoda		
	Thalawthugoda	2-2.5	2-2.5
Fourth	Athurugirya	2-2.5	2.5-3.7
	Korothota	1.2-1.5	1.2-1.5

Table 5.6 Differenecs between existing and expecetd integration
Source: Western Province Division and Research & Development Division, UDA 2018

The overall integration of proposed densified corridors are similarly expected to increase from 2-2.5 to 2.5-3.7 while reducing the integration among the remaining area from 1.2-1.5 to -0.1-0.9, which will ultimately support the proposed node and corridor development of the area.
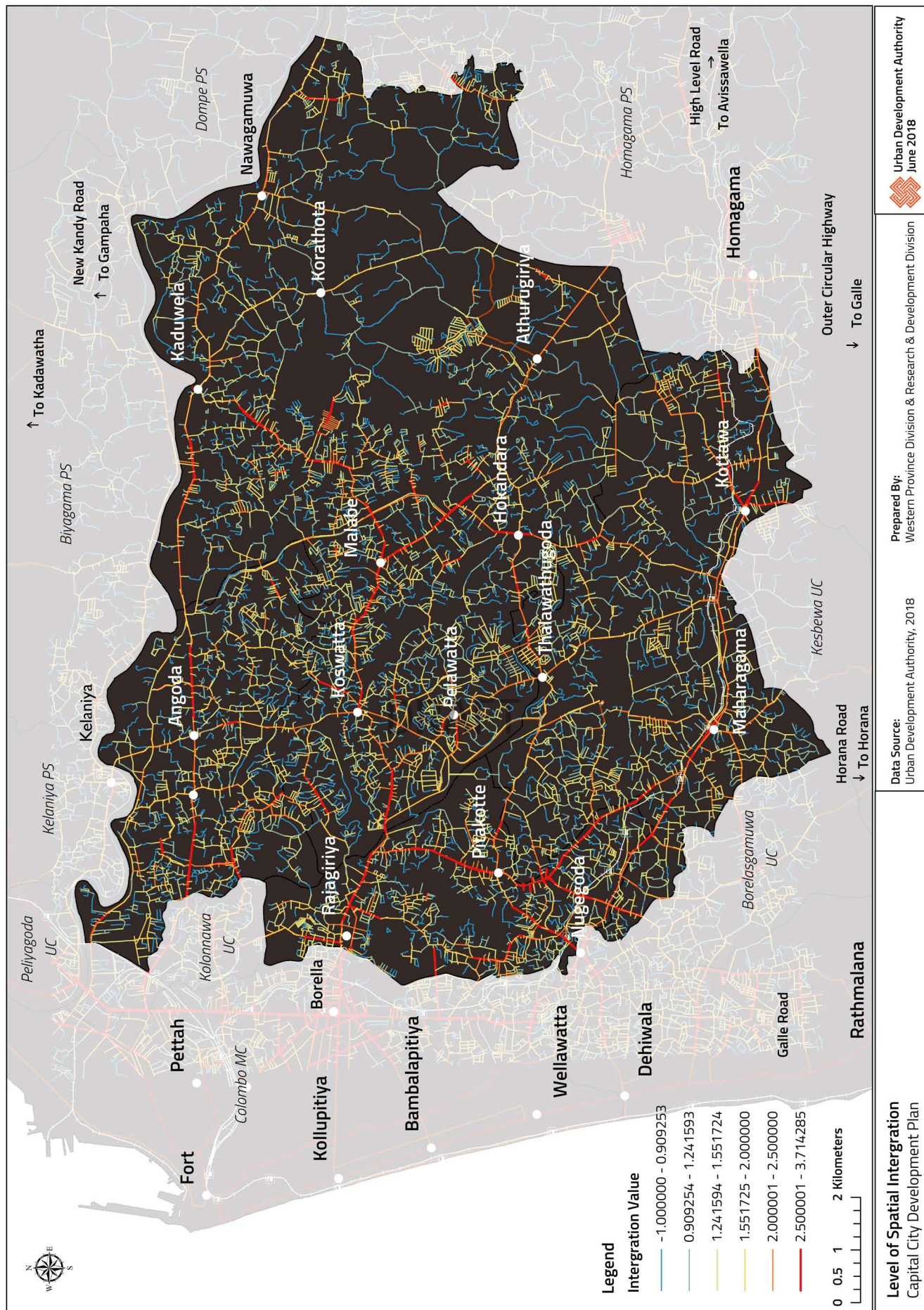
Map 5.12: Level of Spatial Integration 2018
Source: Western Province Division and Research & Development Division, UDA 2018

Legend

Intergration Value
— −1.000000 - 0.909253
— 0.909254 - 1.241593
— 1.241594 - 1.551724
— 1.551725 - 2.000000
— 2.000001 - 2.500000
— 2.500001 - 3.714285

0 0.5 1   2 Kilometers

Level of Spatial Intergration
Capital City Development Plan

Data Source:
Urban Development Authority, 2018

Prepared By:
Western Province Division & Research & Development Division

Urban Development Authority
June 2018
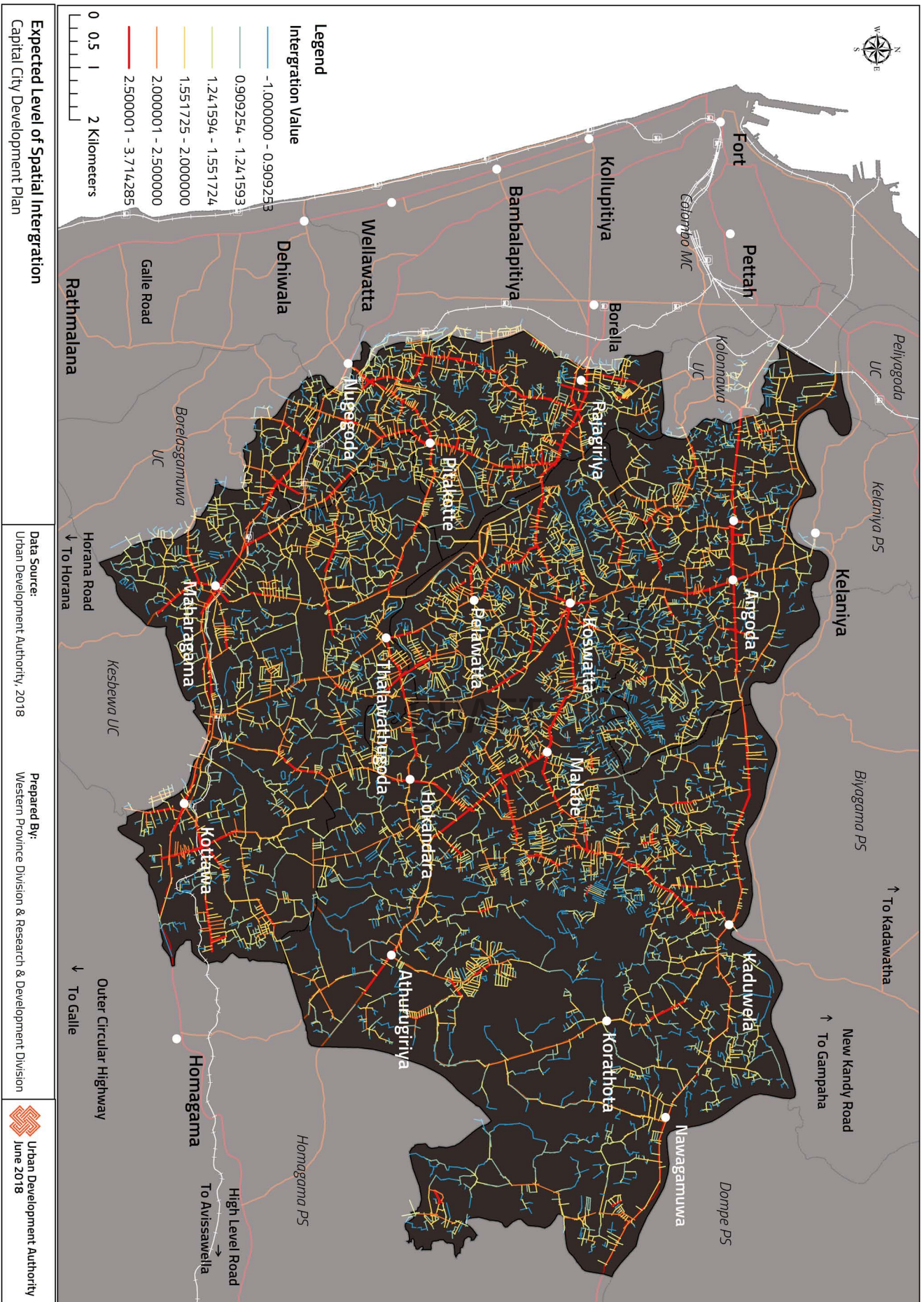
Map 5.13 Expected Level of spatial integration in Capital City
Source: Western Province Division and Research & Development Division, UDA 2018

Legend

Intergration Value
- -1.000000 - 0.909253
- 0.909254 - 1.241593
- 1.241594 - 1.551724
- 1.551725 - 2.000000
- 2.000001 - 2.500000
- 2.500001 - 3.714285

0 0.5 1 2 Kilometers

Expected Level of Spatial Intergration
Capital City Development Plan

Data Source:
Urban Development Authority, 2018

Prepared By:
Western Province Division & Research & Development Division

Urban Development Authority
June 2018

Fort
Pettah
Borella
Kollupitiya
Bambalapitiya
Wellawatta
Dehiwala
Rathmalana
Galle Road
Nugegoda
Pitakotte
Rajagiriya
Kotte
Kelaniya
Angoda
Koswatta
Delawatta
Malabe
Thalawathugoda
Hokandara
Maharagama
Kottawa
Korathota
Athurugiriya
Kaduwela
Nawagamuwa
Homagama

Colombo MC
Kolonnawa UC
Peliyagoda UC
Kelaniya PS
Biyogama PS
Dompe PS
Homgama PS
Kesbewa UC
Borelasgamuwa UC

Horana Road
← To Horana

Outer Circular Highway
↓ To Galle

High Level Road
↓ To Avissawella

New Kandy Road
↑ To Gampaha
↑ To Kadawatha

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4. **Road widening and Land value**

The increased level of integration influences the land value of the area and supports to achieve the priority level of nodes, densities and zones of the area by the year 2030. According to the existing and proposed land value maps, it is clear that land value in low densified and moderate densified area has a high value. This motivation encourages the executive residential and rich class character proposed to the area.

On the other hand, Rajagiriya and Nugegoda are planned to be developed as up-market of the capital area. The high land value in these two town centres tends to attract the high end investors than the general market group. Kotikwatta- Angoda, Malabe and Kaduwela with three identified corridors are predicted to be developed with proposed new characters. Further, the land value market which would be changed through the road widening, is expected to support the proposed scenario. On the other hand, The Periphery including areas such as, Athurugirya and Korothota with low land value is expected to encourage the residential space compared to other areas of the Capital City.

No.	KPIs	2020	2020_rv	2035	2035_rv
1	Pax-km (bn. pax-kms /year)	50.8	51.0	67.8	67.5
2	Pax-hr (bn. pax-hr /year)	2.23	2.26	3.55	3.41
3	VOT (bn. Rs. /year)	496	505	825	799
4	Veh-km (bn. veh.-km /year)	15.88	15.95	19.12	19.02
5	VOC (bn. Rs. /year)	593	599	801	792
6	Speed (km/h)	22.8	22.5	19.1	19.8
7	Supply Cost (bn. Rs. /year)	1,089	1,104	1,625	1,591
8	Accessible Population to Transit (mn.)	0.73	0.73	0.73	0.73
9	CO2 Emission (mn. ton/year)	3.14	3.16	4.12	4.08
10	CO2 Loss (bn. Rs. /year)	7.7	7.8	10.1	10.0
11	Accident Loss (bn. Rs. /year)	9.2	9.3	11.1	11.0
	Total Cost (bn. Rs. /year)	**1,110**	**1,125**	**1,651**	**1,617**

Table 5.7: KPI Of Road Widening Proposals Of Capital City
Source: Western Province Division and Research & Development Division, UDA 2018

Legend

Land Value
Per Perch (Rs)

- 104,000 - 253,000
- 253,001 - 351,000
- 351,001 - 500,000
- 500,001 - 728,000
- 728,001 - 1,077,000
- 1,077,001 - 1,611,000
- 1,611,001 - 2,428,000
- 2,428,001 - 3,678,000
- 3,678,001 - 5,590,000
- 5,590,001 - 8,515,000
- 8,515,001 - 12,991,000
- 12,991,001 - 19,837,000

0 0.5 1 2 Kilometers

Data Source:
Filed Survey 2018

Prepared By:
Western Province Division & Research & Development Division

Urban Development Authority
June 2018

Fort
Pettah
Kollupitiya
Bambalapitiya
Wellawatta
Dehiwala
Colombo MC
Kolonnawa UC
Peliyagoda UC
Nugegoda
Rajagiriya
Sri Jayawardanapura Kotte MC
Pitakotte
Koswatta
Kelaniya PS
Kelaniya
Angoda
Kotikawatta - Mulleriyawa PS
Pelawatta
Thalawathugoda
Malabe
Hokandara
Maharagama
Maharagama UC
Kottawa
Athurugiriya
Kaduwela MC
Kaduwela
Biyagama PS
Korathota
Homagama
Homagama PS
Dompe PS
Borelasgamuwa UC
Kesbewa UC
Dehiwala Mount Lavinia MC
Galle Road
Rathmalana

Horana Road
← To Horana

Outer Circular Highway
← To Galle

High Level Road
To Avissawella

Low Level Road
To Avissawella

New Kandy Road
To Gampaha

To Kadawatha

DRAFT

Map 5.14 Distribution Of Land Value With Total Impact Of The Transport Development Strategy
Source: Western Province Division and Research & Development Division, UDA 2018

DRAFT

Legend

Land Value

- Very Low
- Low
- Moderate
- High
- Very High

0 0.5 1 2 Kilometers

Dompe PS

New Kandy Road
↑ To Gampaha

↑ To Kadawatha

Biyagama PS

Kelaniya PS

Peliyagoda UC

Kolonnawa UC

Low Level Road
To Avissawella ↑

Homagama PS

High Level Road
To Avissawella ↑

Homagama

Outer Circular Highway
↓ To Galle

Kesbewa UC

Maharagama UC

Horana Road
↓ To Horana

Borelasgamuwa UC

Dehiwala Mount Lavinia MC

Galle Road

Rathmalana

Kaduwela MC

Korathota

Kaduwela

Athurugiriya

Hokandara

Malabe

Kottawa

Angoda

Koswatta

Pelawatta

Thalawathugoda

Kelaniya

Kotikawatta

Kotikawatta- Mulleriyawa PS

Maharagama

Rajagiriya

Sri Jayawardanapura

Kotte MC

Pitakotte

Nugegoda

Borella

Pettah

Colombo MC

Kollupitiya

Bambalapitiya

Wellawatta

Dehiwala

Fort

Distribution of Land Value with Total Impact of the Transport Plan
Capital City Development Plan

Map 5.15: Distibuion of Land Value with total Impacts of the Transport Strategy
Source: Western Province Division and Research & Development Division, UDA 2018