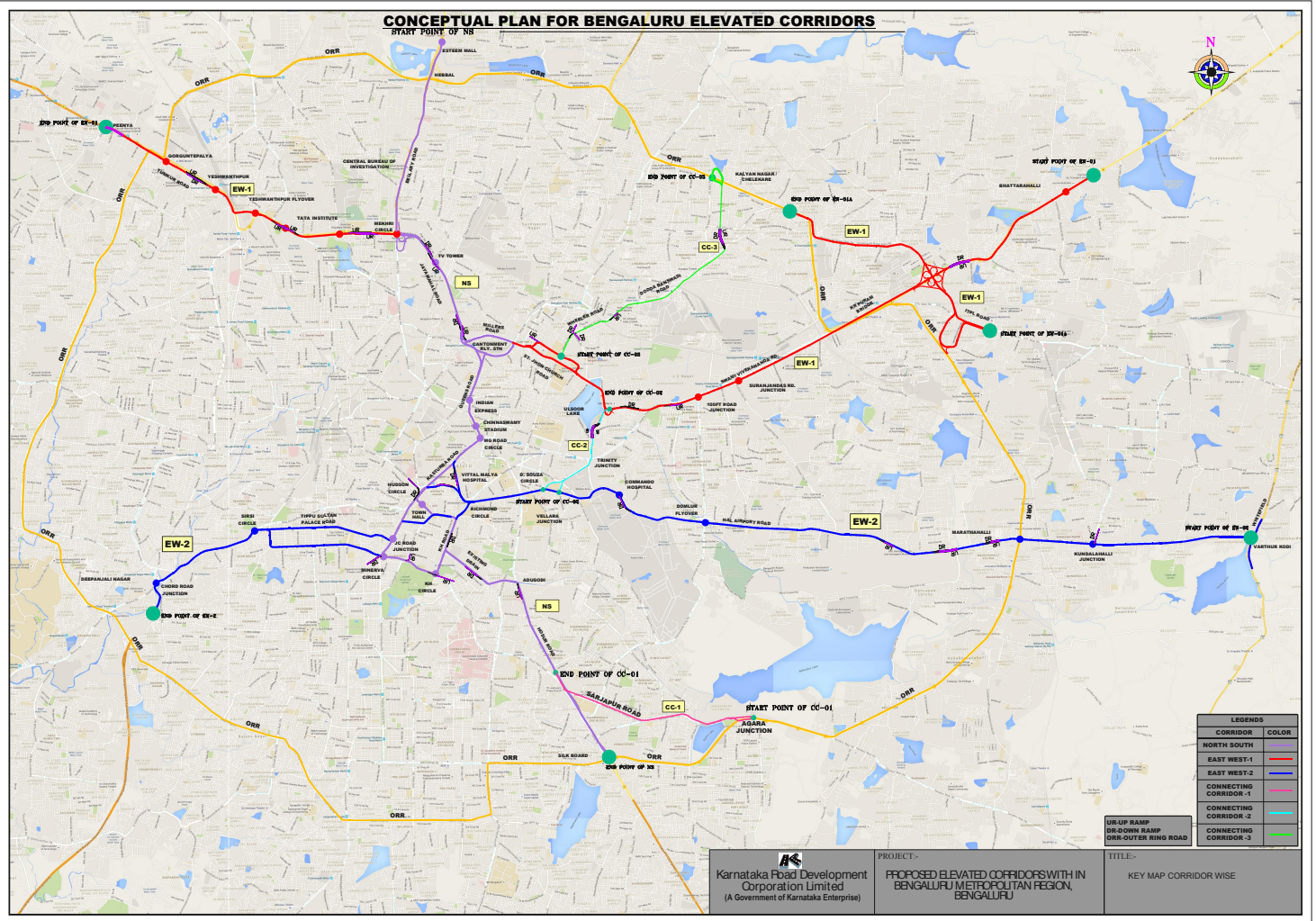


CONCEPTUAL PLAN FOR BENGALURU ELEVATED CORRIDORS

START POINT OF NS



BRIEF SUMMARY OF PROJECT

1. INTRODUCTION:

Bengaluru is one of the fastest growing cities in India. The city is also known as Silicon Valley of India. It is in forefront supporting the growth of Information Technology and several other service based industries attracting people and business from across nation. This has led to the unpredicted and uncontrolled growth forcing city to face tough challenges in providing and extending basic infrastructure and services. Road transport is one such infrastructure which has been troubling the city in the recent past. With ever increasing traffic in the city, these roads have reached beyond their capacities and now are always in jam conditions at any given point of time. High volumes of traffic and congested roads have resulted in V/C ratios, as high as 4 in most of the roads. As per IRC, the V/C ratio shall be 0.6 for city roads and more than 1 means the roads are in worst level of service.

In view of the above, the GoK has planned to construct elevated corridors connecting north-south and East-west of the city to ensure fast and hassle free connectivity between the city and outskirts of the city. The project was announced by GoK in year 2015 and further included in the budgeted speech of Hon'ble CM for the year 2016-17. Further, Government of Karnataka (GOK), has asked **Karnataka Road Development Corporation Limited (KRDCL)** to plan for construction of Elevated Corridors within Bengaluru Metropolitan Region, which aims to alleviate congestion and provide unhindered travel along the proposed corridors that will contribute to savings in travel time, vehicle operating cost, improve road safety and minimize carbon emissions resulting in overall economic growth.

2. PROJECT DESCRIPTION

The project consists of total 6 corridors extending to an approximate length of 92.2 km with one main corridors running north to south and two corridors running east to west. Other three corridors are connecting corridors which provide access to east-west corridors. The proposed elevated corridors establish connectivity to the arterial roads around Bengaluru.

Following road sections are proposed as Elevated Corridors.

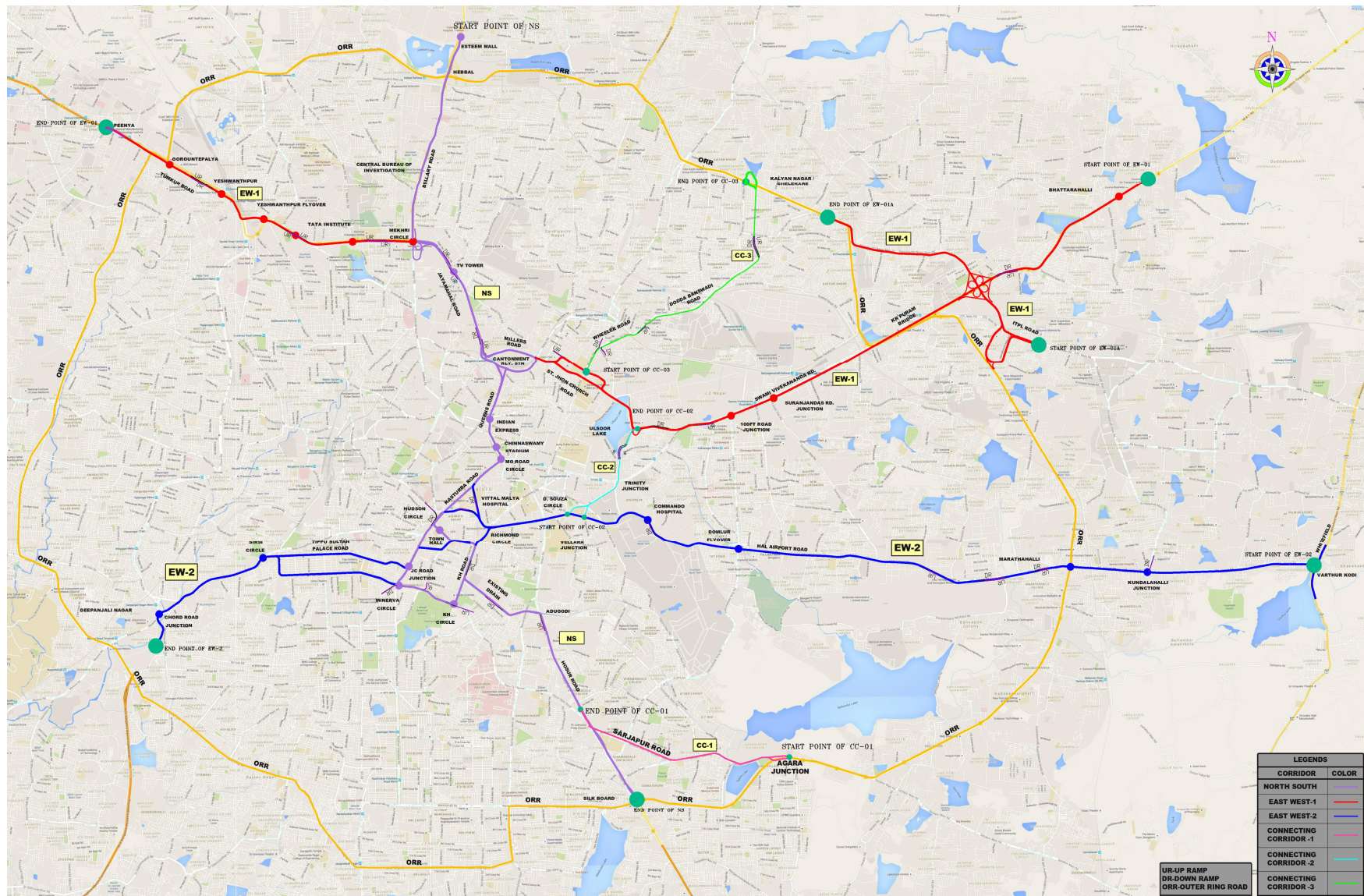
Table 2-1: Proposed Elevated Corridors and Salient Features

Sl No.	Name of the Corridor	Lane Configuration	Corridor Length (Km)	One-way loop(Km)	Entry/Exit ramps (Nos.)	Total Length (Km)
1	NS-1 :North-South Corridor-1 connecting Hebbal Circle to Central Silk Board (i.e., NH-7 towards Bellary to NH-7 towards Hosur)	6 Lane	22.23	4.66	22	26.89
2	EW-1 :East-West Corridor-1 connecting K.R. Puram to Gorguntepalya (i.e., NH-4 towards Old Madras and NH-4 towards Tumkur Road) including Rammurthy Nagar (Ring road) to ITPL Stretch	6 Lane	29.58	2.36	14	31.94

Sl No.	Name of the Corridor	Lane Configuration	Corridor Length (Km)	One-way loop(Km)	Entry/ Exit ramps (Nos.)	Total Length (Km)
3	EW-2: East-West Corridor-2 connecting Varthur Kodi to Jnanabharathi (Old Airport Road, SH-35 to Mysore Road, SH-17)	4 Lane	24.12	5.36	13	29.48
4	CC-1: Connecting Corridor-1 Connecting East-West Corridor-2 at St. John's Hospital Junction to Agara on Outer Ring Road	4 Lane	4.48	0	0	4.48
5	CC-2: Connecting Corridor-2 Connecting East-West Corridor-1 at Ulsoor to East-West Corridor-2 at D'souza circle.	4 Lane	2.8	0	4	2.80
6	CC-3: Connecting Corridor-3 Connecting East-West Corridor-1 at Wheeler's road jn.to Kalyan Nagar at Outer Ring Road	4 Lane	6.46	0	5	6.46
TOTAL LENGTH			89.66	12.38	58	102.04

A Key plan of the corridors is presented in below Figure.

Figure-1: Key plan of the corridors



The proposed project corridors are described in the following sections.

North - South Corridor (NS): Connecting Airport Flyover (near Esteem Mall) and Silk Board Junction

The corridor starts from Airport Flyover (near Esteem Mall) and ends at Silk Board flyover via. Jayamahall main road - Queen's Road-Indian Express Junction - Infantry Road Junction - Minsk Square - Kasturba Road - Hudson Circle - Audugodi Nala - Audugodi main road.

East - West Corridor -1 (EW-1): Connecting NH48 (earlier NH-4) at Battarahalli and Gorguntepalya on Tumkur Road

The project corridor starts at Battarahalli on Old Madras Road and ends at Gorguntepalya junction on Tumkur road via. Devasandra Main Road - Ramamurthy Nagar Main Road Junction (ITI) - KR Puram cable stayed bridge - Suranjandas Road Junction - 80 Feet Road junction - 100 feet Indiranagar road Junction - D Bhaskaran Road Junction - Kensington Road Junction (Philips buildings) - Ulsoor lake - St. John's Road - Millars road - Jayamahall Main Road - Mekri circle - CV raman road - Yeswanthapur flyover - Yeswanthapur Railway Station - Outer Ring Road junction (CMTI)

East - West Corridor -2 (EW-2): Connecting SH-35, Varthur Kodi to NICE link road on Mysore road

The corridor takes off at Varthur kodi junction on SH-35 - ends at NICE link road on Mysore road via. Kundala halli gate junction - Marathahalli underpass - Suranjandas Road Junction - Old Airport road - Wind tunnel road junction - Domlur Junction - Trinity Church Junction - D'Souza circle - General K S Thimayya Road - Vellara Junction - Richmond Circle - K.H.Road - Lalbagh Main Road - Minerva junction - Chamarajpet 5th Main Road - 9th Cross Road - 1st Main Road Junction - Alur Venkata Rao Road - Sirsi Circle - Satellite Bus Station - Bapuji Nagar - Deepanjali Nagar, -Nayandahalli Junction - Rajarajeshwari Nagar Gate

Connecting Corridor-1 (CC-1): This corridor creates connectivity between North-South corridor and Sarjapura road, corridor starts at Sarjapur bridge at Aagara and traverses via Jakkasandra - Madiwala Market Junction - Koramangala 100 Feet Road Junction

Connecting Corridor-2 (CC-2): This corridor creates connectivity between East-West Corridor-1 and East-West Corridor-2, corridor starts from D'souza circle on Richmond road Junction and ends at Ulsoor Lake via General KS Thimayya Road - Trinity Junction & Ulsoor Lake Junction (connecting East West Corridor-1)

Connecting Corridor-3 (CC-3): This corridor creates connectivity between St. Johns Church Road and Outer Ring Road (ORR) at Kalyan Nagar. (The location where new airport expressway starts as in Master Plan), corridor starts from St. Johns Church Road

Junction (East-West Corridor 1) and ends at Kalyan Nagar at Outer Ring Road via. Wheeler Road - ITC factory – Sevanagar - Banaswadi Main road.

The broad proposals for the elevated corridor project includes

- (i) Propose elevated road structures of 6/4/2 lanes
- (ii) Propose interchanges, ramps (entry and exit) and loops at major interjections
- (iii) Design road furniture, median separation, road safety and traffic control features
- (iv) Design of runoff drainage structures
- (v) Plan and propose automated electronic toll collection system

2.1.1 Need of the Project

Bengaluru city is experiencing the unexpected increase in traffic day by day but the roads are becoming narrower to accommodate the increasing traffic. Implementation of elevated project corridors will decongest the Bengaluru roads to a larger extent which are presently choked with traffic causing delays in reaching destination and environmental pollution in the form of deterioration of air quality and increased noise levels. Hence, it is need of the hour to address the traffic and related issues Bengaluru is experiencing. Some of the benefits of implementing the elevated corridor are mentioned below.

- Proposed six elevated corridors (three major corridors and three connecting corridors) establish connectivity to major arterial roads like Bellari road, Hosur road, Hoskote road, Tumkur road, Mysore road, Sarjapura road.
- Proposed elevated corridor project helps segregating the fast moving long distance traffic without interrupting the slow moving neighbourhood traffic and contributes to increase in speed of at grade traffic movement.
- Elevated corridor project makes the public transport provided by BMTC on at grade road faster, thus helping public to reach their destination faster.
- Jammed roads lead to slow moving traffic releasing obnoxious gaseous vehicular emissions and elevated roads make way for traffic movement without hindrance thus emitting less air pollutants.
- The proposed elevated corridors will decongest most of the major junctions along the alignment making some of them signal free junctions.
- Bengaluru public has been demanding for adequate number of pedestrian crossings along the major traffic hit roads. Elevated corridors will facilitate the pedestrians to use at grade roads more safely.

2.1.2 Environmental Impact Assessment Notification and it's applicability to the project:

Elevated corridors do not have mention in the list of projects qualifying for environmental clearance as per EIA Notification. As, certain stretches of alignment of elevated corridor forms a part National Highways (NH 4 & NH 7) and State Highways, elevated corridors may be classified as NH or SH. Further, as the elevated corridors are proposed for decongesting

Bengaluru city roads, this project can be classified under the project or activity 7(f) Highways. Considering elevated corridors as a part of national and state highways, neither total length of the elevated corridor is more than 100 km nor additional right of way or land acquisition is greater than 40 m on the existing alignments. The main corridor of proposed six elevated corridors has a length of 85.00 km in addition to 12.357 long one way connecting loops.

On the other hand, additional right of way or total width of acquisition along the proposed alignments does not exceed 40 m. In fact, one of the main objectives is, not to acquire land except for junction improvements and entry and exit points linking existing roads beneath the proposed corridors. Project involves acquisition of 64 hectares of land. **Hence considering both length and width of the project corridor will not qualify for environmental clearance.**

Instead, there is a possibility for considering elevated corridor projects under buildings and construction projects which are open to sky and has activity area spread equal to or more area than 20,000 sq. m as per schedule 8A of EIA Notification. In all possibilities the elevated corridor can be a construction project and the activity area of construction exceeds 20,000 sq. m thus qualifying itself to be considered for environmental clearance under schedule 8A of EIA Notification.

But the elevated corridor project is suggestively different from building and construction projects in terms of project requirements, activities, environmental impacts and mitigation measures for various phases of the project.

Hence, it is requested to the Honourable Committee on consideration of categorization of the proposed project under EIA Notification and the necessity of environmental clearance for the project.

Table – 3: Summary of project details

Sl. No.	Description	Quantity
1	Length of new alignment proposed Elevated Corridor (kilometres)	97.145
2	Width of the new alignment Elevated corridor (meters)	9 to 17.61 to 24.61
3	Length of existing alignment proposed to be strengthened/widened (kilometres)	NA
4	Width of existing alignment (meters)	NA
5	Width of existing alignment after widening (meters)	NA
6	Total length of the alignment (kilometres)	97.145
7	Number of bridges Major & Minor	NA
8	Length of bridges (meters) Width of bridges (meters)	NA
9	Number of culverts	NA
10	Length of culverts (meters)	NA
11	Number and distance (meters) between underpasses	NA
12	Number of intersections	
13	Length of intersections (meters)	
14	Number of railway crossings	4
15	Length of railway crossings (meters)	
16	Number of villages through which alignment passes	Bengaluru city
17	Population of the villages through which alignment passes	

Table - 1 Details of National parks etc. within 15 km radius from the highway

Sl. No.	Item	Name	Aerial distance (km and reference point on the highway alignment)
1	National Park	Bannerghatta National Park	9.1 km from end point of NS Corridor
2	Marine Park	None	
3	Sanctuary/tiger reserve Elephant reserve/Turtle nesting ground	None	
4	Core zone of biosphere reserve	None	
5	Reserved Forest	- Jarakabande Reserved Forest, Kammagondanahalli - Reserved forest near Puttenahalli	- 2.4 km from start point of EW-1 corridor - 3.82 km from end point of NS Corridor
6	Wild life habitat	Bannerghatta National Park	9.1 km from end point of NS Corridor
7	Habitat of endangered /exotic species	None	
8	Coral reef	None	
9	Mangroves	None	
10	Lakes /reservoirs/dams	Lakes as per the attached list below	
11	Breeding site	None	
12	Nesting site	None	

Table – 2: Details of water bodies adjacent to proposed elevated corridor

Sl. No.	Name of the Corridor	Water bodies / Lakes	Chainage	Location	LHS / RHS
1	EW-1: East-West Corridor-1	KR Puram Lake,	1400 - 2000	Along NH 4	RHS
2		Pond near Nagappa Reddy layout	4230	Along Ramamurthy nagar main road	LHS
3		Benniganahalli Lake	5040 - 6400	Swamy Vivenkananda Road	RHS
4		Lake near Sarvagna Nagar	9780 - 10040	Swamy Vivenkananda Road	RHS
5		Ulsoor Lake	11350 - 12080	Kensington Road	LHS
6	EW-2: East-West Corridor-2	Varthur Lake	400 & 400 - 1000	HAL Airport road and along SH 35 respectively	LHS & RHS respectively
7		Thubarahalli Lake	2400 – 2700	Varthur road / HAL Airport road	RHS
8		Vrishabhavathi Nalla	24550 - 25400	Mysore road	LHS / RHS
9	NS-1: North-South Corridor-1	Sampangi Lake	7600 – 7700	Kasturaba road	LHS
10	CC-1: Connecting Corridor-1	Agara Lake	200 - 1100	Sarjapur main road	LHS
11	CC-2: Connecting Corridor-2	Ulsoor Lake	1800 – 2400	Kensington road	LHS
12	CC-3: Connecting Corridor-3	Chelekere	5650 – 5900	100 ft Ring road	RHS