COMPREHENSIVE MOBILITY PLAN FOR JAIPUR

Jaipur Development Authority

WilburSmith ASSOCIATES

Study Objective

"Develop a Comprehensive Mobility Plan for Jaipur"

CMP is a transport sector master plan-cum-investment program document to meet the mobility concerns arising from the population and business growth of the study area

CMP! NEW PARADIGM

CMP WILL

- Provide for Future transport in accordance with NUTP
- Define Corridors of Movements
- Focus on moving people
- Integrate land use development and transport policy
- Streamline transport projects
- Capitalize and retain city strength
- Systematically plan the infrastructure investment program
- Support regional economy, growth, mobility demands

CMP WILL NOT

- Conduct feasibility analysis of projects
- Detail cost estimates
- Locate Stations and Size them
- Detail traffic engineering plans
- Include alternate Analysis
- Include DPR

Review of Past Studies

The Master Development Plan for Jaipur region has been prepared for the horizon year 2025

Reports on Metro Rail and BRT for Jaipur

Master Plan for Traffic & Transportation – 2002- prepared by Shah Technical Consultants Pvt. Ltd

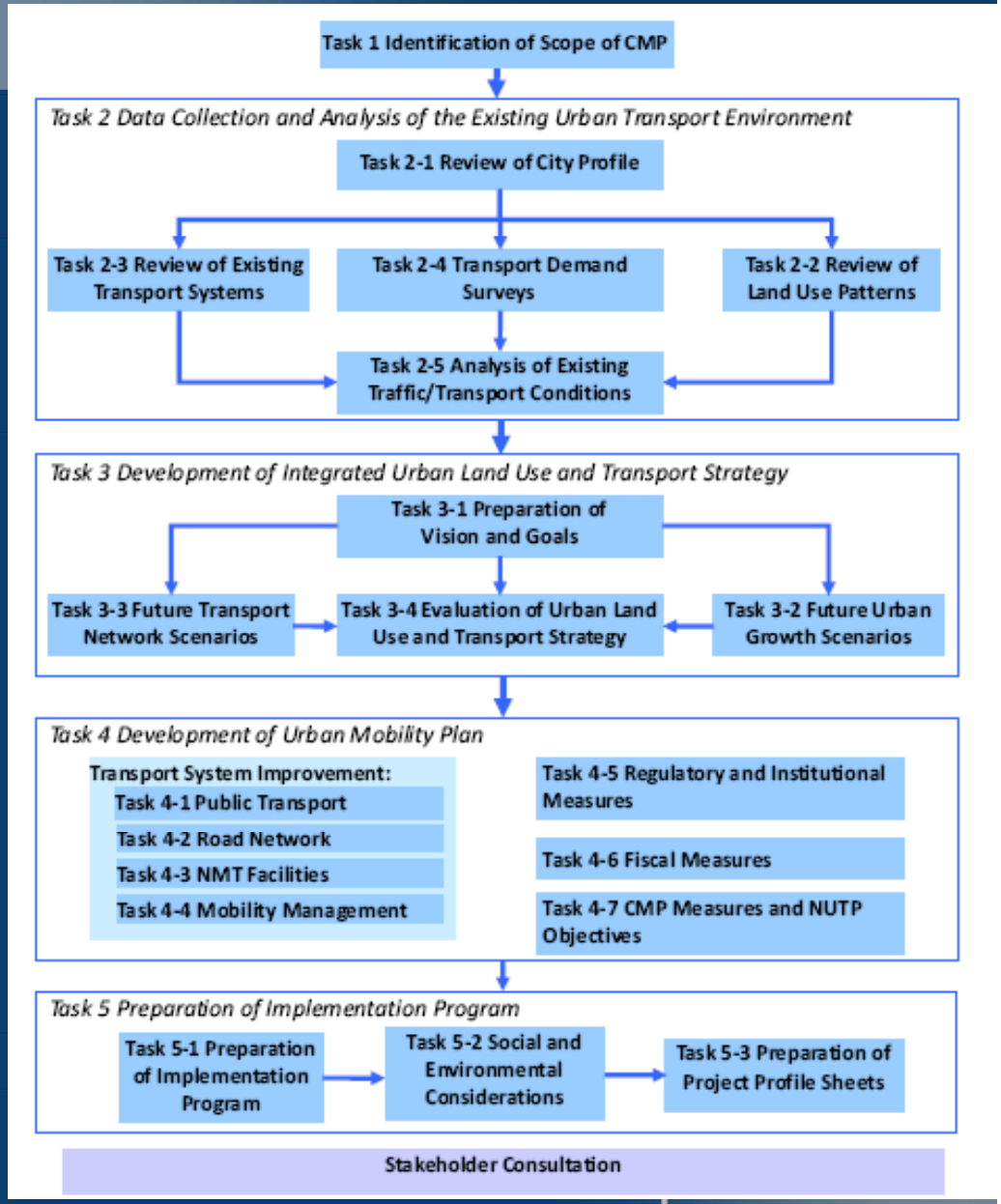
Master Development Plan 2011 for Jaipur, 1998 – prepared by Jaipur Development Authority

Jaipur Urban Mass Transport Study, 1997 – prepared by Central Road Research Institute (CRRI)

Mass Transit Railway System for Jaipur, 1992 – prepared by Rites

Approach & Methodology

- ✓ Review
  - CMP Process
  - Study area
- ✓ Vision & Objectives
- ✓ Goals
  - Present Transport Scenario
  - Future Transport Scenario
  - Benchmarks
- ✓ Strategies
  - Network Strategy
  - Landuse Strategy
- ✓ Initiatives
- ✓ Program
  - Investment & Phasing
  - Institutional



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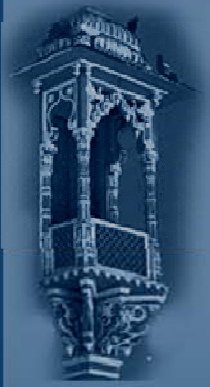
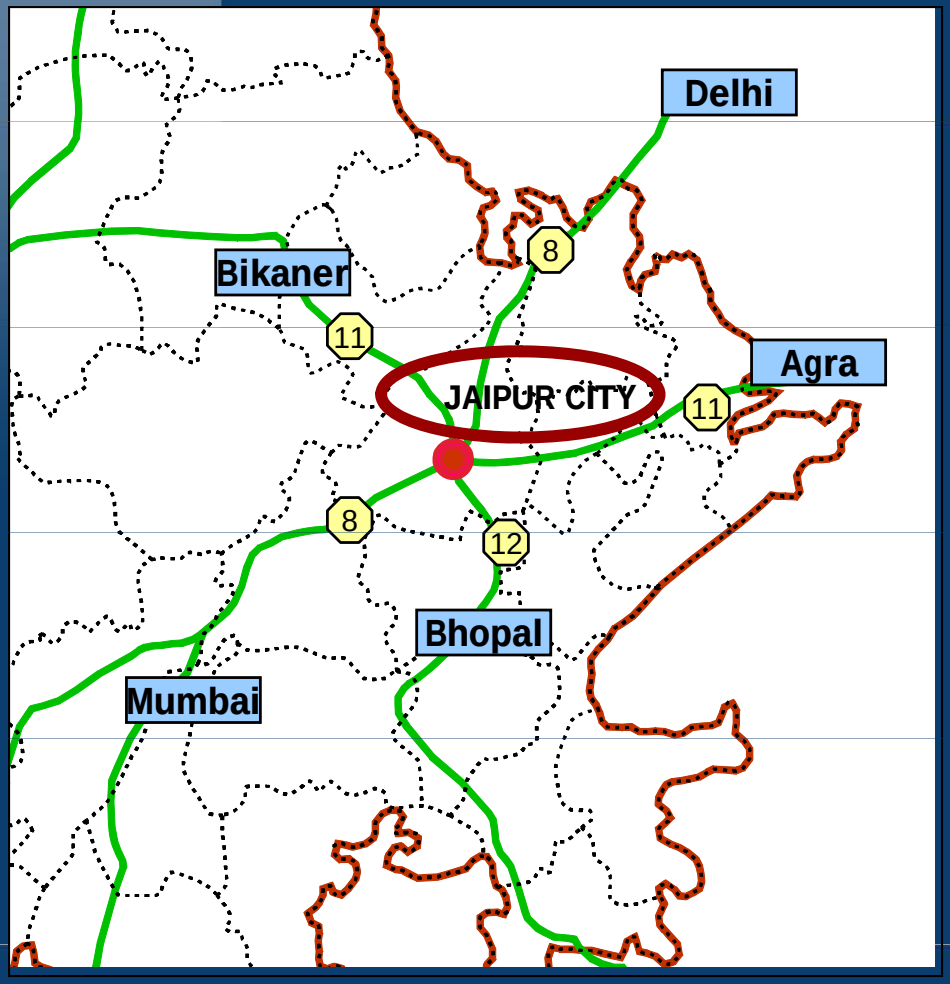
Study Area


NH 11
Kalwar Road
Jaipur R.S.
Station Rd
MI Road
NH 11 Agra Road
Ajmer Road
NH 8
Airport
Jagatpura Road
NH 12
Tonk Road



Regional Setting



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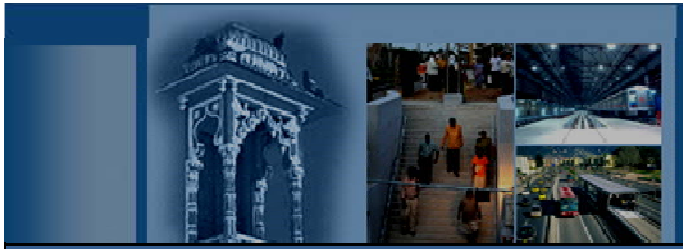


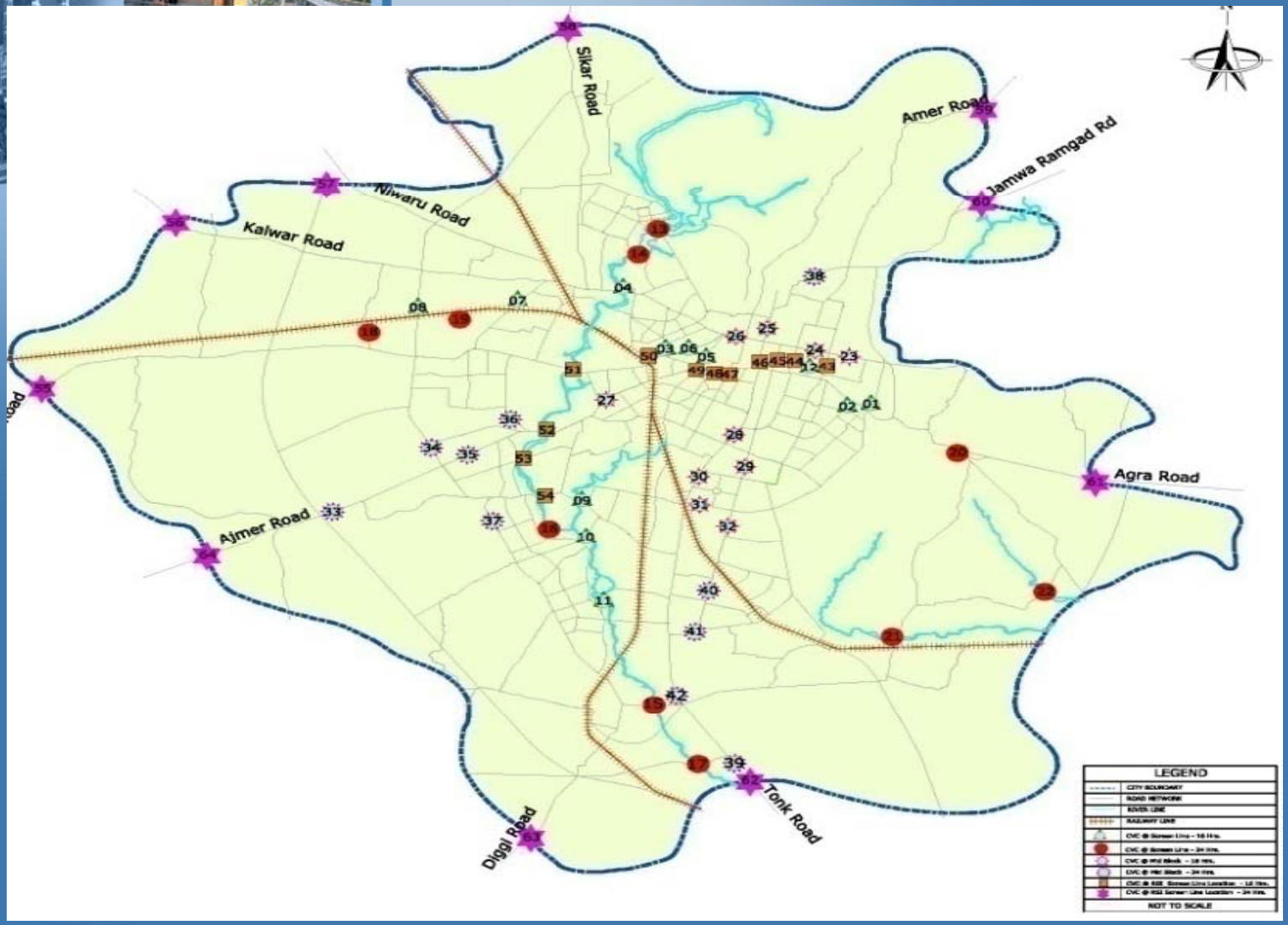
Traffic Surveys

Traffic Surveys	Time	Locations
Cordon & Screen Line Volume Count	24 Hrs	10
	16 Hrs	12
Classified Traffic Volume Counts and Origin Destination by Road side Interview	24 Hrs	10
	16 Hrs	12
Mid Block Volume Count	24 Hrs	10
	16 Hrs	10
Household Interview	-	10000 Samples
Stated Preference Survey	-	1000 samples
Speed and Delay	Identified stretches	30 km
Bus Occupancy Survey	9am–1pm & 4pm-8pm	20
Boarding & Alighting Counts and Bus passenger Interview survey		20

Traffic Surveys

Traffic Surveys	Time	Locations
Road Inventory	N/A	200 km
Classified Turning Volume Counts-Junctions	12 Hours	15
Queue Length Survey	N/A	5
Parking Survey	12 Hours	14 Stretches
Pedestrian Volume Counts	12 Hours	15
Vehicle Operator Surveys – Taxi, Auto, Goods Vehicles	12 Hours	5

Survey Locations



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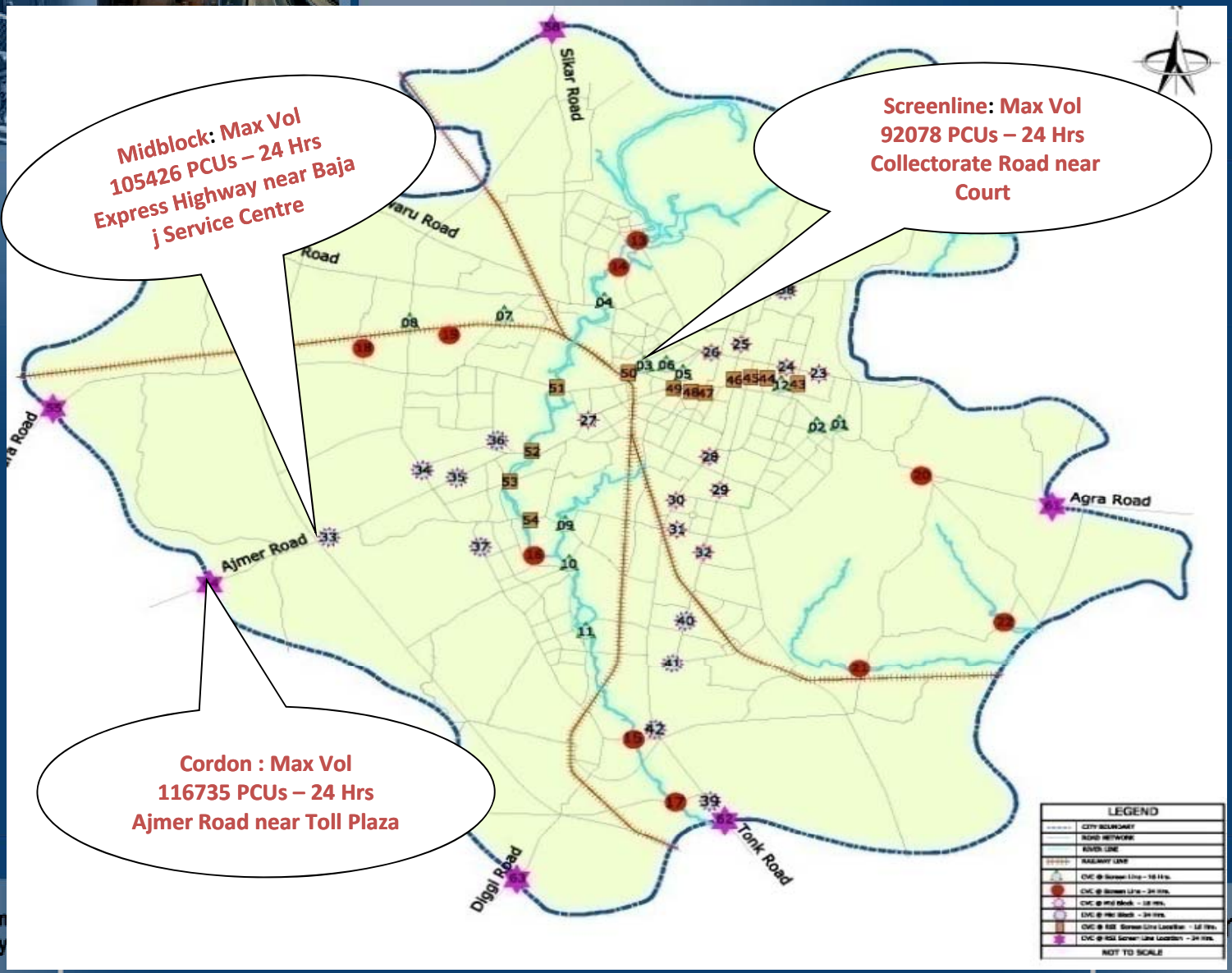
Traffic Volume Count

@Screenlines @Midblock @Cordon



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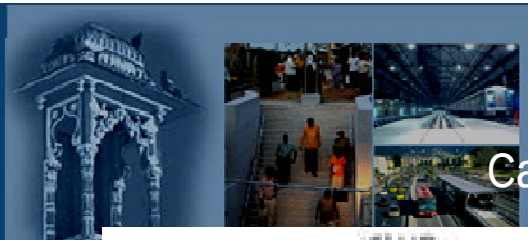
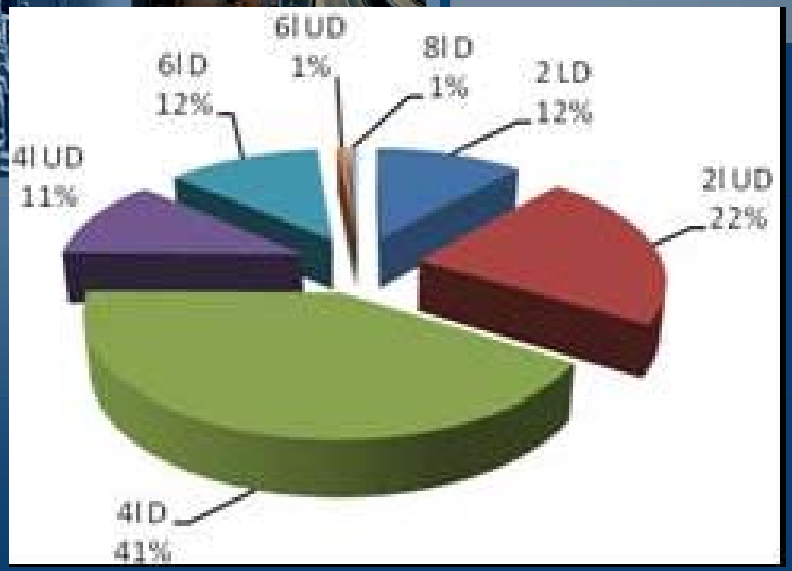
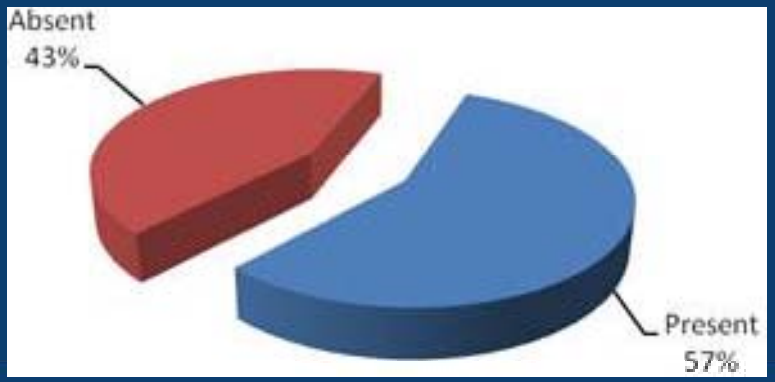


Road Network Inventory

Category of Roads





On-street Parking

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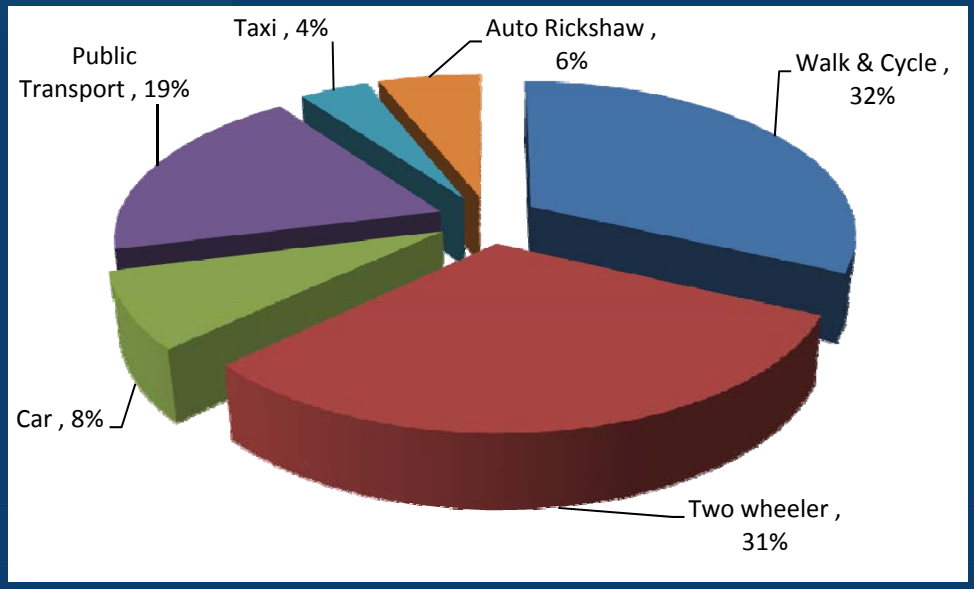
Household Characteristics

Average House Hold size	4.1
Per Capita Trip Rate (All modes)	1.1
Average Household Income	Rs 11,600/ Month

Mode Share



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RSI Survey at Cordon Points

Average Occupancy at Outer Cordon

Mode	Average Occupancy
Two Wheeler	1.6
Car	1.8
Auto	2.6
Taxi	2.6

The Through Traffic bypassing the city is 20%

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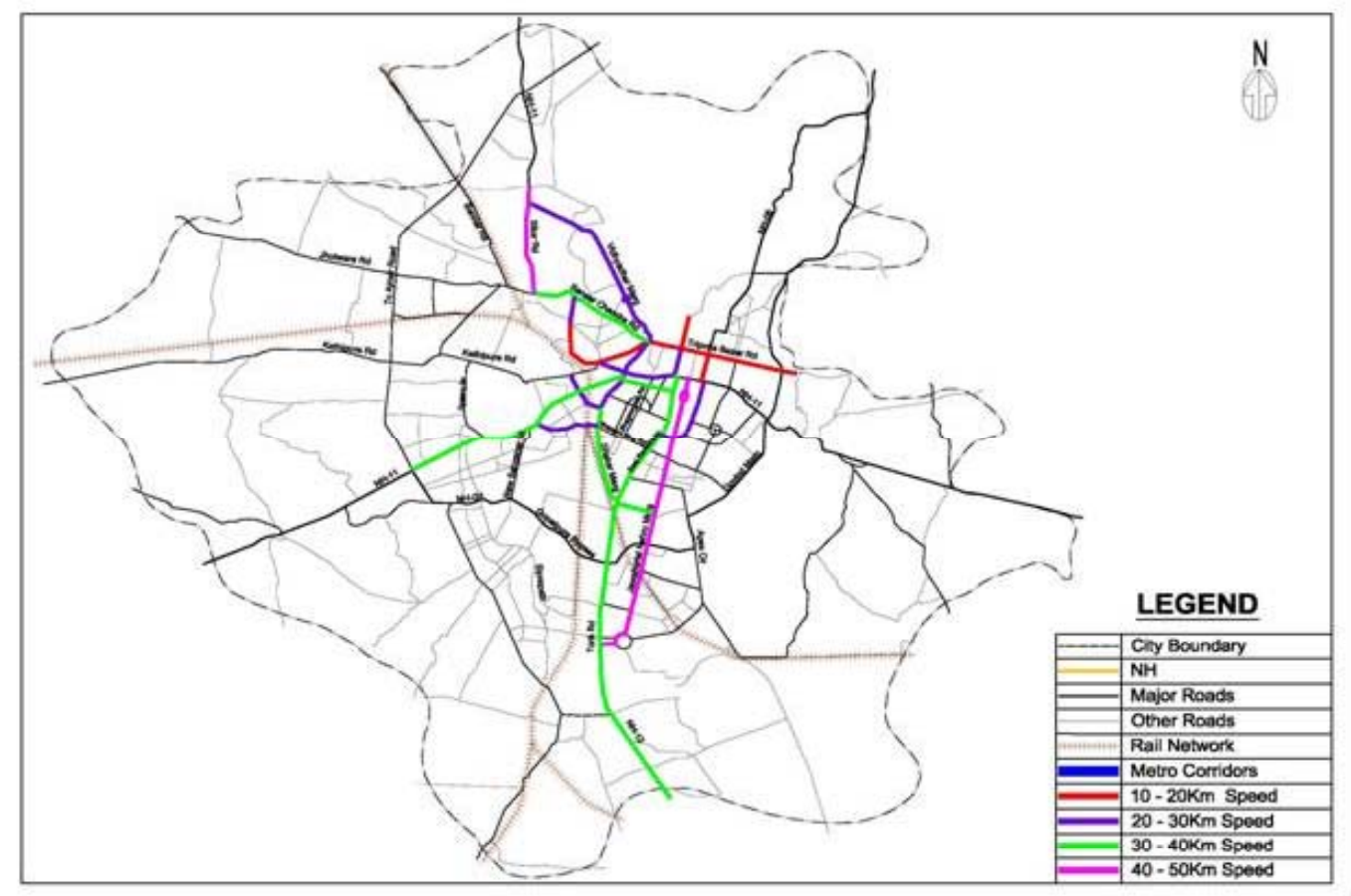
Speed and Delay Survey



The Average Journey speed

Commercial area – 16 kmph

Non-commercial – 30 kmph

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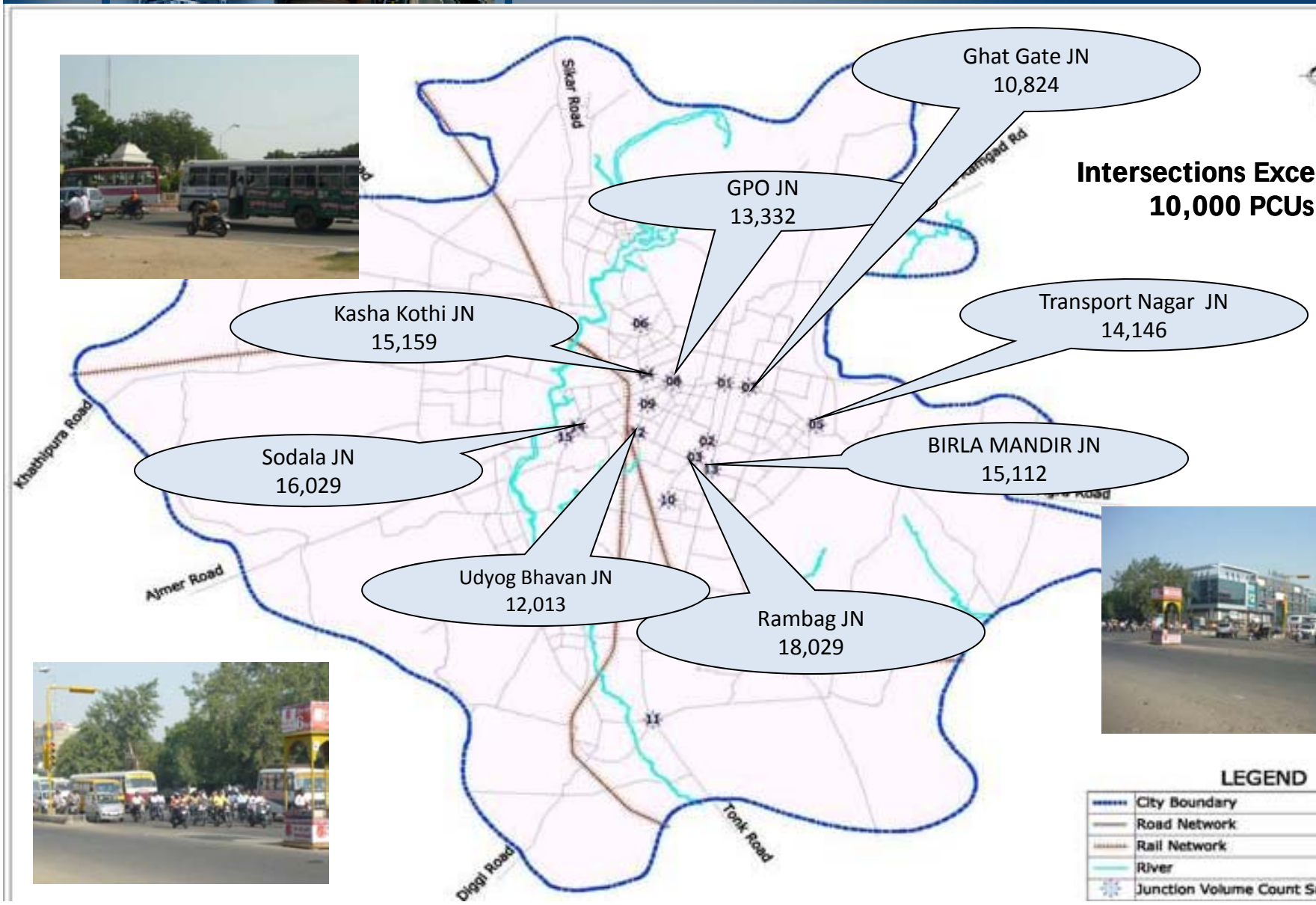
Turning Volume Count

Peak Hr Traffic

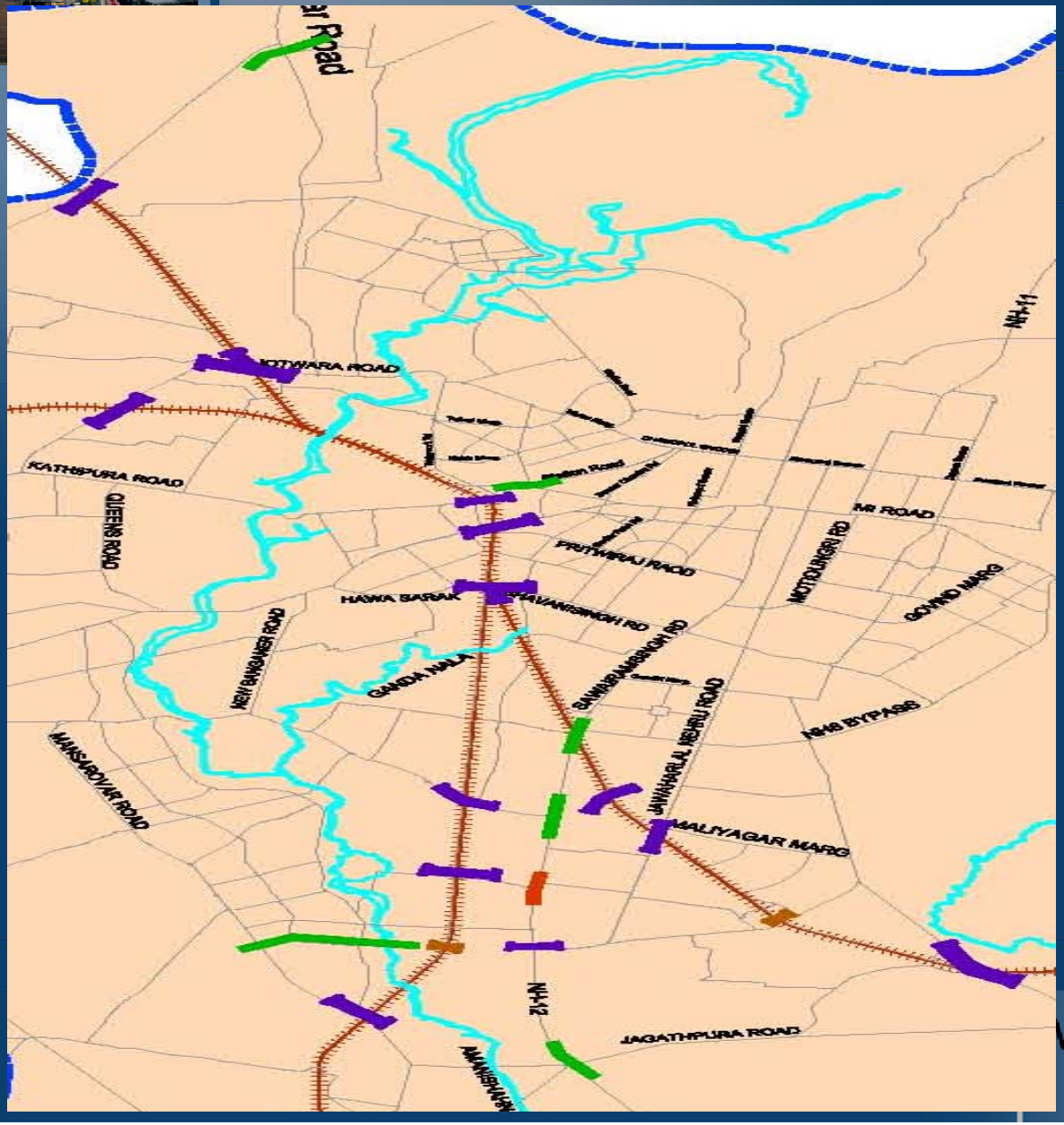


Intersections Exceeding 10,000 PCUs

LEGEND

	City Boundary
	Road Network
	Rail Network
	River
	Junction Volume Count Survey Locations

Existing ROB's & RUB's



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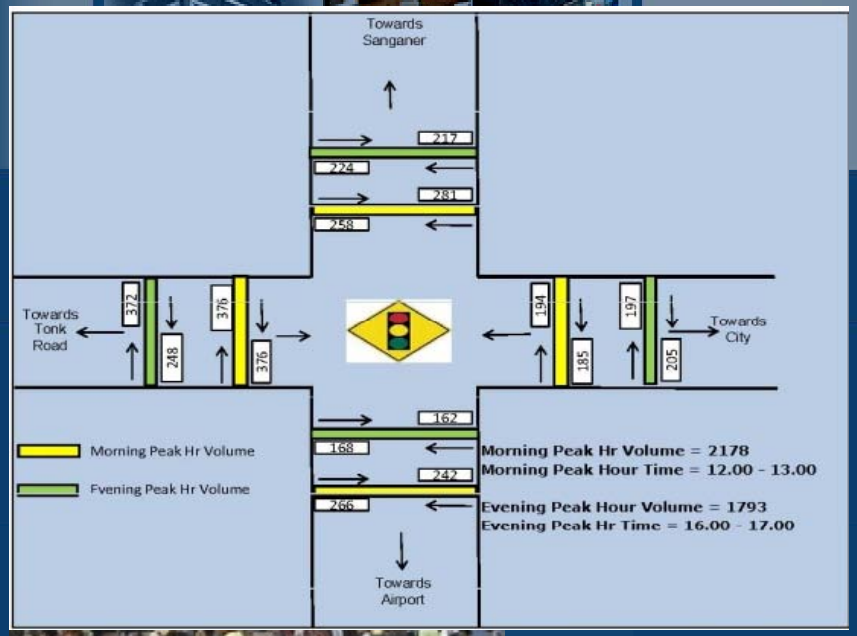
Parking Survey

- Short Term Parking (0.5 Hours) - 90% of Vehicles
- Motorized Two Wheelers are parked predominantly at
  - Johari Bazaar Road
  - Tripoli Bazaar Road
  - Chandpol Bazaar Road
  - Ramganj Bazaar Road
  - Surajpol Bazaar Road
  - Kishanpol Bazaar Road

Pedestrian Crossing Count



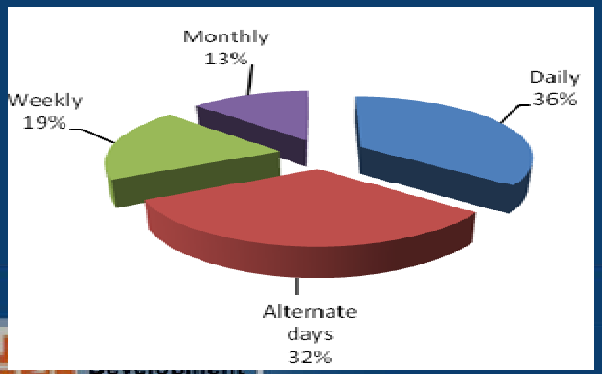
- Sanganer Airport Junction (19656)
  Ghat Gate Junction (14007)
- Peak hour -10.00 AM to 11.00 AM & 4.00 PM to 5.00 PM

IPT Survey

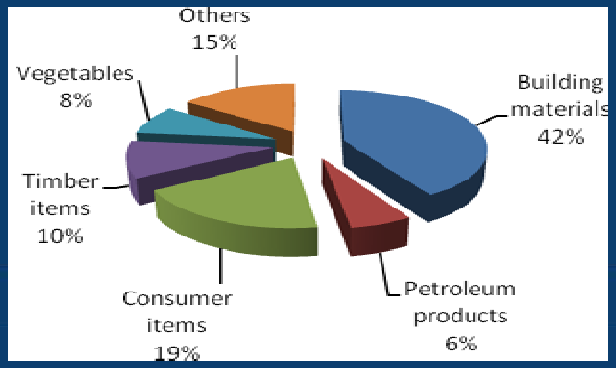
- Average service life
  - Taxi = 18 years
  - Auto Rickshaw = 13 years.
- Average annual maintenance cost
  - Taxi = Rs. 12550
  - Auto Rickshaw = Rs. 11903
- Average number of passengers carried per trip
  - Auto rickshaw = 4 including driver
  - Taxi = 5 including driver

Truck Operator Survey

Trip Frequency



Commodities



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Bus Passenger Survey

- Max observed Volume :
  Chandpol Bazaar 3662 passengers both directions
- Bus occupancy : 45
- Distance travelled to go bus stop : < 2 km (49%)
- Waiting Time : > 10 minutes (67%)
- Cost : 5-10 Rupees (47%)

Accidents

Year	Non Fatal	Fatal	Total Accidents	Non Fatal Growth rate(%)	Fatal Growth rate (%)
2004	1915	343	2042	-	-
2005	2150	416	2367	12%	21%
2006	2124	454	2379	-1%	9%
2007	2096	495	2316	-1%	9%
2008	1894	452	2098	-10%	-9%
30 April 2009	600	125	655	-	-

Travel Demand Modelling Process

OD Data

Network

Landuse

Assignment

Validation

Cost skim

Calibration of Trip End Model

Calibration of Distribution function

Calibration of Mode Choice Function

Forecast for present year

Synthetic OD's

Assignment

Validation

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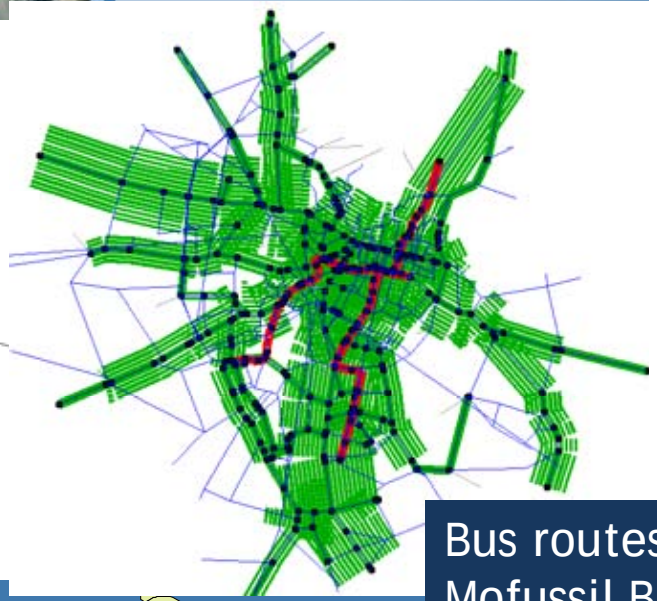
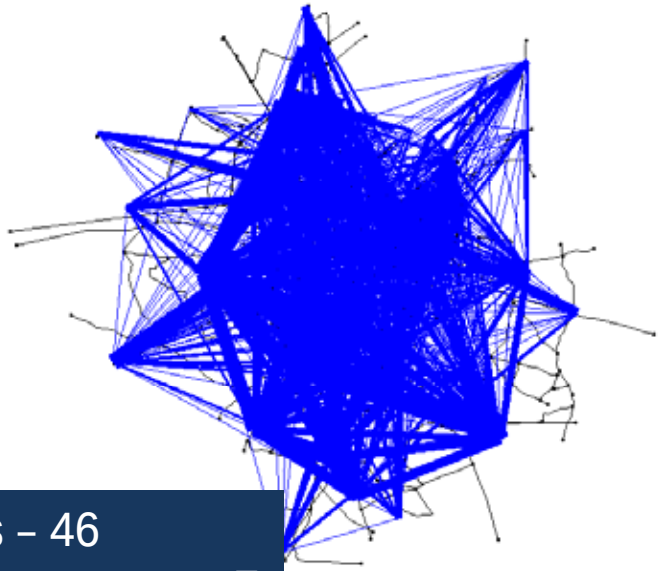
Road Network

Bus Routes

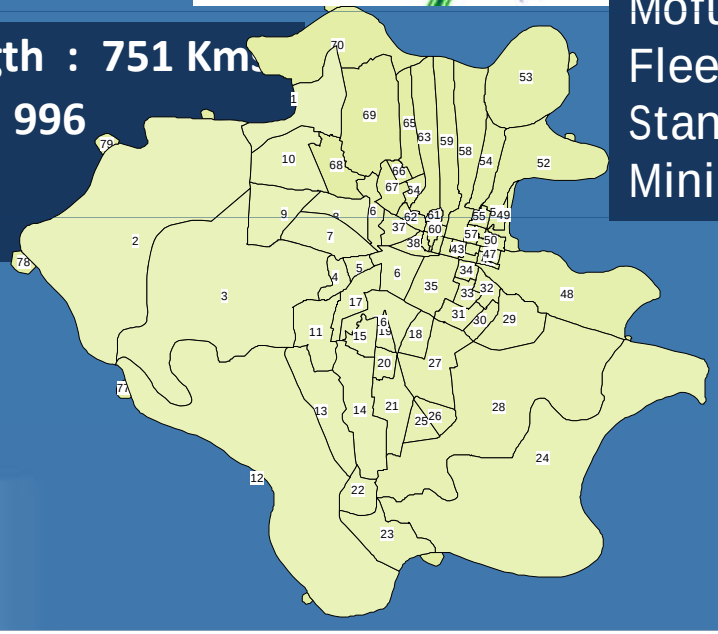
Desire line for all modes





- **Total road length : 751 Km**
- **No. of Nodes : 996**
-

Bus routes – 46
Mofussil Bus routes – 7
Fleet
Standard bus - 250
Mini Bus - 1500



- **Internal Zones - 70**
- **External Zones - 10**

- **Total - 80 Zones**

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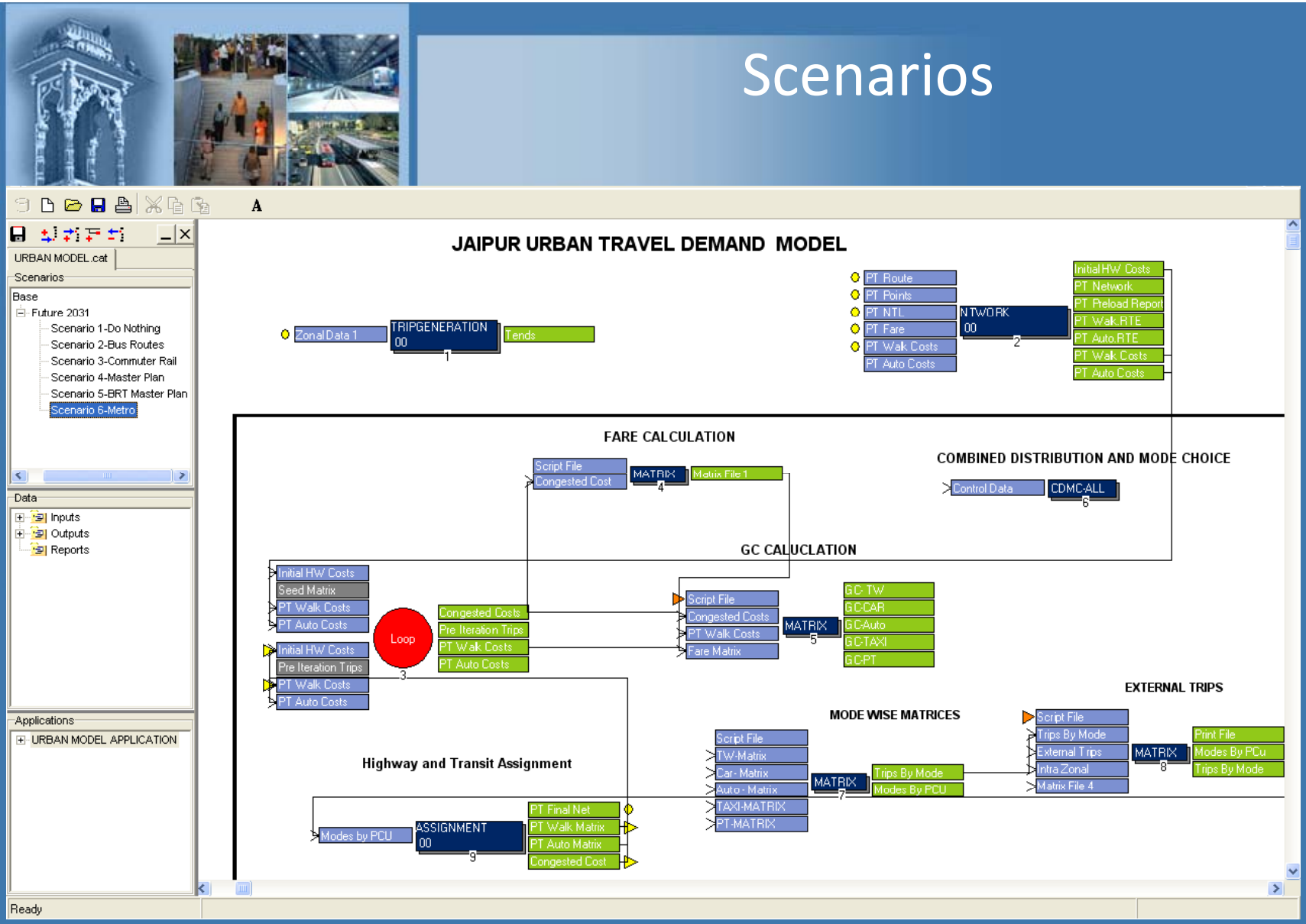
Scenarios



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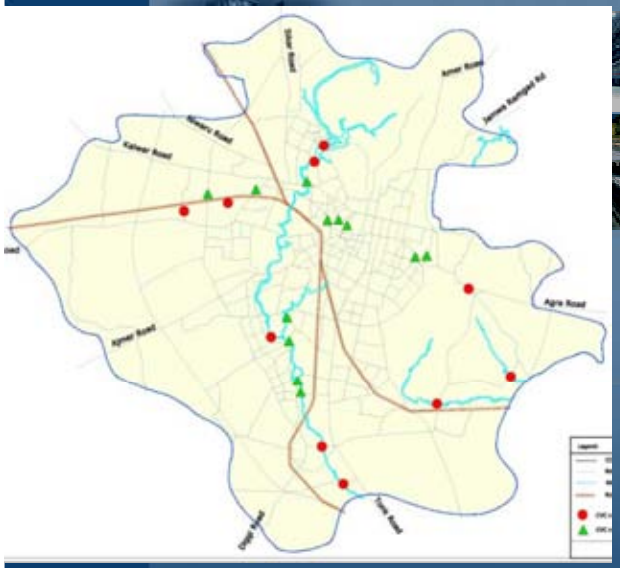
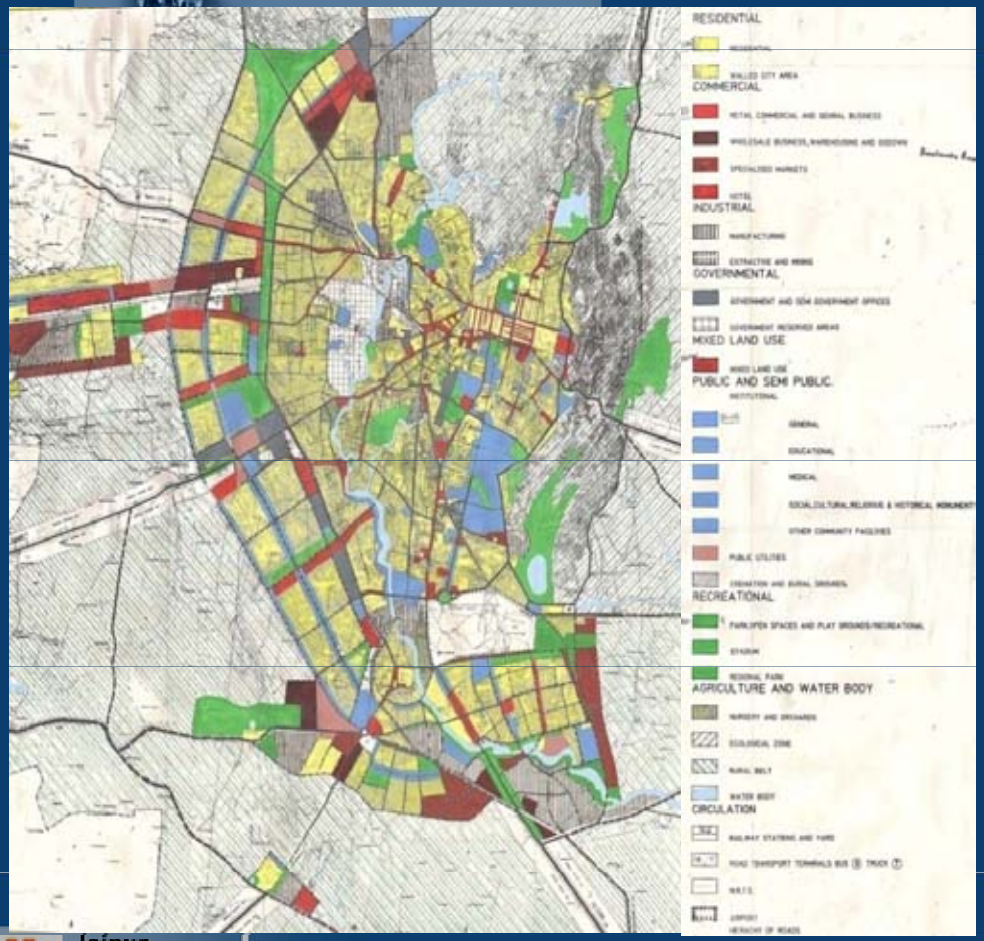


Validation Screen lines

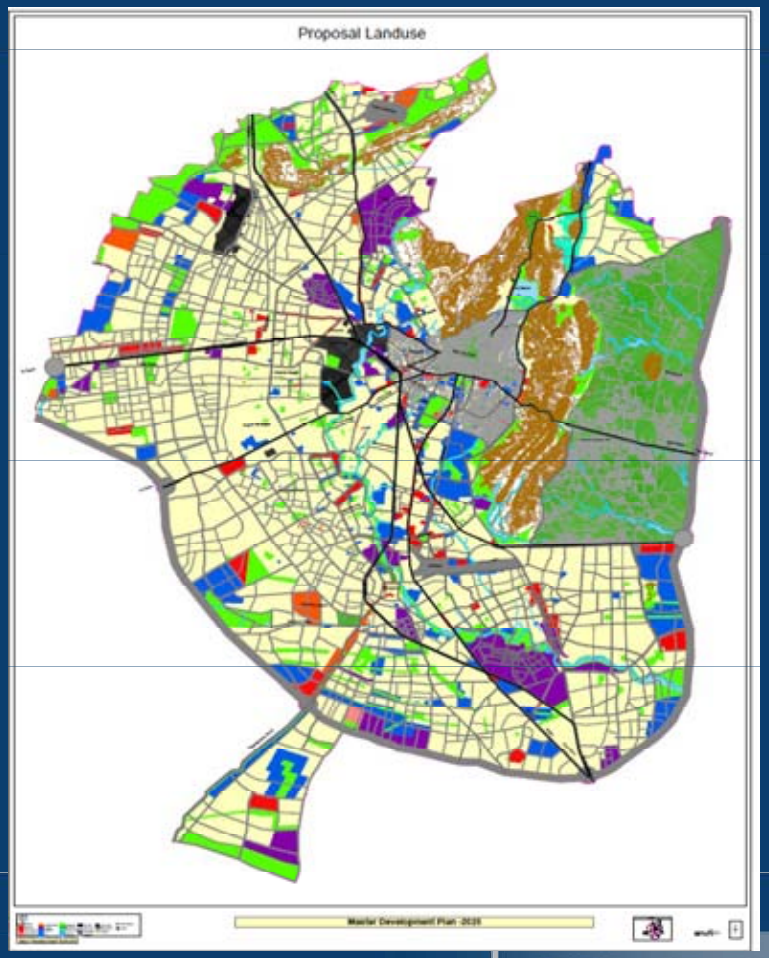
Screen line 1 – NORTH - SOUTH						
	Direction 1			Direction 2		
Mode	Assigned	Observed	%Difference	Assigned	Observed	%Difference
Two wheeler	6373	7075	-10%	8533	8440	1%
Car	2734	2586	6%	2786	3028	-8%
Auto rickshaw	3380	3477	-3%	4940	5076	-3%
Taxi	2197	2116	4%	3334	3613	-8%
Public transport	30277	28962	-5%	31414	27263	-15%
Screen line 2- EAST-WEST						
	Direction 1			Direction 2		
Mode	Assigned	Observed	%Difference	Assigned	Observed	%Difference
Two Wheeler	4458	4237	5%	3758	3709	1%
Car	2221	2260	-2%	1785	2072	-14%
Auto rickshaw	2221	2394	-7%	1891	2094	-10%
Taxi	1316	1314	0%	1557	1754	-11%
Public transport	13788	12109	-14%	15438	14351	-8%

Existing & Proposed Land Use

2009



2025



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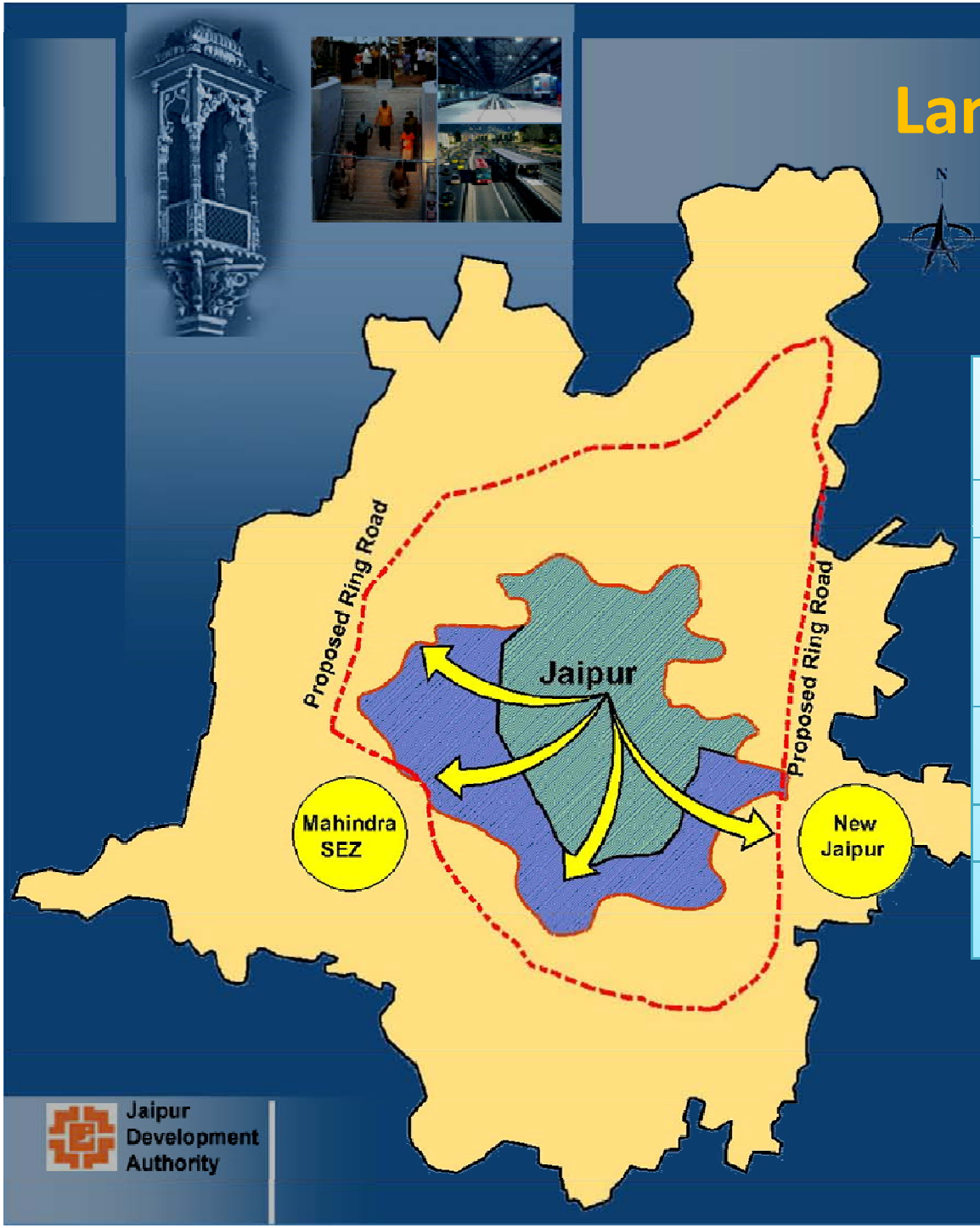
Land Use Developments



Growth Nodes	Location	Area Specified (Acres)
Mahindra SEZ	Bhankrota	25000
International Conventional Center & Golf Course	Dehmikalan	125
Vatika IT City	Bhankrota	800
Sports City	Achrol	512
Film City	Sumel Village	1000

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Travel Characteristics

Traffic Characteristics - 2009	
Trips assigned (Peak Hour) (motorized)	: 1.97 lakhs
Walk +Cycle	: 31%
Mode share -Two wheeler (All)	: 27%
Mode share -Car (All)	: 8%
Mode share-Auto rickshaw(All)	: 6%
Mode share - Taxi (All)	: 8%
Mode share - Public Transport (All)	: 19%
Average Network Speed	: 28 Kmph
Average Trip Length	: 6.5
Passenger Km	: 15.34 lakhs

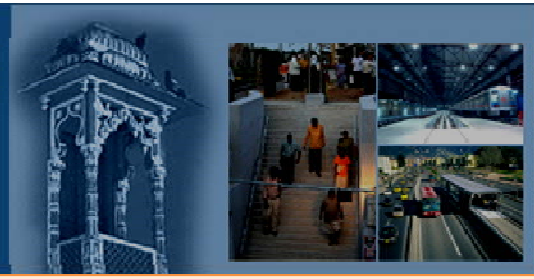
Traffic Characteristics - 2031 (Do Nothing)	
Trips assigned (Peak Hour) (motorized)	: 5.52 lakhs
Walk +Cycle	: 31%
Mode share -Two wheeler (All)	: 33%
Mode share -Car (All)	: 10%
Mode share-Auto rickshaw(All)	: 7%
Mode share - Taxi (All)	: 9%
Mode share - Public Transport (All)	: 10%
Average Network Speed	: 14 Kmph
Average Trip Length	: 7.9
Passenger Km	: 52.3 lakhs

National Urban Transport Policy

- Encouraging integrated land use and transport planning
- Equitable allocation of road space with people, rather than vehicles
- Encourage greater use of public transport and non-motorized modes
- Effective Institutional mechanisms & capacity building
- Intelligent Transport Systems
- Reducing pollution levels through travel changes, enforcement, stricter norms, technological improvements, etc.
- Innovative financial mechanisms
- Private section participation
- Pilot projects

WB Strategy for Urban Transport

- Street design standards that are walk-and bicycle-friendly
- Re-allocate the existing road space to provide priority for public transport by way of parking and traffic management
- Priority to urban road networks within low-income and poor areas
- Metropolitan Transport Regulatory Authority (Fares, subsidies, mode split etc)
- Regulatory reform aimed at higher-quality services and/or lower production costs (MTCs, Commuter rail and MRTS).
- Develop a market for public transport suitable to serve travel demands for low income people
- Introduce rigorous project evaluation for large projects
- Focus on at-grade, BRT lines, with publicly-owned infrastructure and competitively awarded service concessions, (inclusive of feeder/distributor networks).
- Ensure that new primary roads include a provision for rapid public transport modes



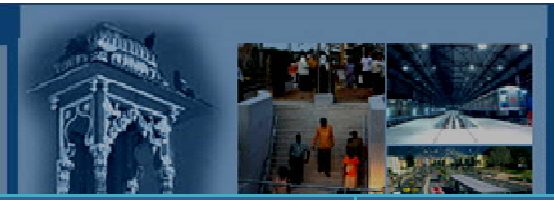
Vision & Goals

Comprehensive mobility Plan will have high class sustainable and efficient transport that will meet the needs of the economic developments including Tourism proposed in the area

Index	Formulation	Present	Goal
PT Mode Share	Public Transport Trips / Total motorised Trips	19%	50%
Bus Supply	Bus Fleet / Lakh of Population	45	60
IPT	Registered IPT vehicles / Lakh of Population	958	850
Walkability	Footpath Length / Road Length	51%	100%
Fatality	No. of Fatalities / Lakh of Population	71	10
NMT	% of NMT trips in total trips	31%	31%

CMP Strategy & Policies

#	Strategy	Policy
1	Moving people rather than vehicles	• Augmenting the coverage and capacity of the rail and bus transits • Priority for bus transit by reservation of lanes along major arterial roads • Differential pricing commensurate with the LOS for public transit. • Running mini-buses for railway/metro stations access
2	Integrating land use and urban transportation	• Developing a transport network based on Comprehensive Transport & Traffic Study • Restructuring the land use distribution around MRTS/transit nodes • Reduce the gap in the supply of minor arterial/collectors. Develop grid network in outer areas

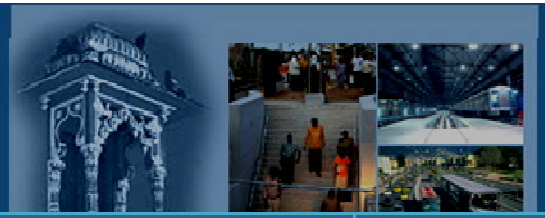


CMP Strategy & Policies

#	Strategy	Policy
3	Priorities to non-motorized transport (NMT)	• Footpaths in residential streets and on major roads with commercial activities • Redeeming the existing footpaths from encroachments & obstructions • Propose legal framework for evicting the encroachments on footpaths / roads • Demarcating road space exclusively for movement by pedestrians and cyclists • Providing safe passage of pedestrian / cyclists by grade separation.
		• Widening critical road links and intersections
4	Optimizing the existing road and transport infrastructure	• Phased widening of roads to their prescribed street alignment width • Articulating the road network by developing missing links • Selected junction improvements for improving corridor throughput • Upgrading high density corridors as multi-modal transit corridors • Shifting the inter-regional terminals from city core to the city fringe
5	Putting a parking policy in place	• Mandative off-street parking norms for various landuses • Develop multi-level parking at major traffic generating locations • Develop park-and-ride facility at all critical sub-urban / RTS / metro rail stations • Develop park-and-ride facility at all critical bus terminals • Restrict/ban on-street parking on critical commercial streets • Parking pricing to reduce the use of private modes • Construction of parking complexes on government agencies land

CMP Strategy & Policies

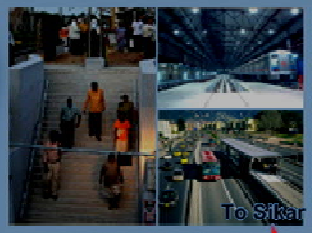
	Strategy	Policy
6	Redefining the role of para-transit	• Encourage wider coverage and capacity by the para-transit • Provide parking for para-transit at public transport terminals • Encourage cycle-rickshaws to operate between residential areas and transit routes
		• Regulate the operation of para-transit by enforcing minimum safety norms.
7	Segregating freight traffic & passenger traffic	• Plan and develop orbital roads in the form of urban bypasses • Plan and develop outstation truck terminals and parking
8	Deploying various travel demand management (TDM) measures	• Stagger the school & office & market times zone- wise • Encourage car-pooling and van-pooling • Encourage new industrial complexes to have residential quarters within their premises • Decentralise major activities to reduce traffic

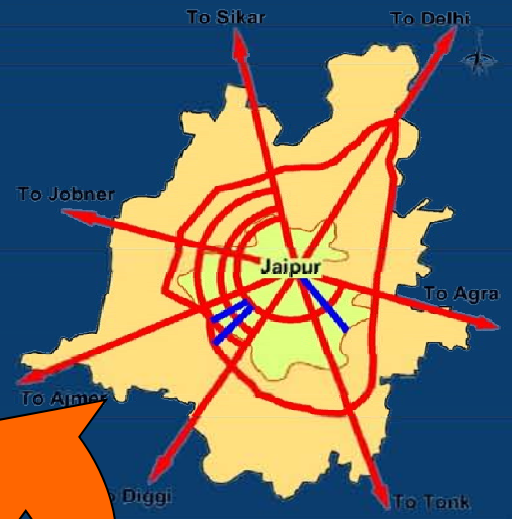


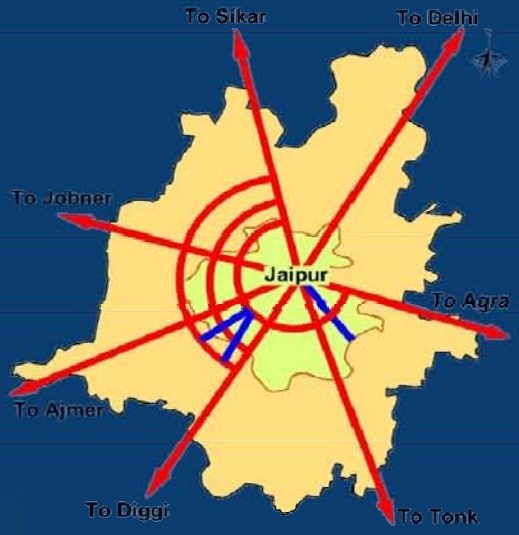
CMP Strategy & Policies

	Strategy	Policy
9	Putting in place an environmental development management mechanism	• Enlarge vehicular population using pollution free fuels viz. LPG / CNG / battery • Establish a GIS based air quality monitoring and information system • Major transport development measure to comply with environmental safeguards • Subject every major transport development measure to safety audit.
10	Setting up a unified institutional framework encompassing all modes	• Set up UMTA within a specified timeframe with coordinating, planning and advisory role • PPP in development as well as operation of urban transport infrastructure
11	Enforcement as a potential tool for development	• Effectively clear infrastructure assets from encroachments by constant patrolling • Campaigns and special drives to educate the road users to adhere to traffic discipline
12	Promoting innovative technologies / practices	• Leverage ITS and technology applications • Develop new roads with ducts for services / utilities • Cement-concrete the existing road pavement particularly the road intersections and

Network Strategy Concept







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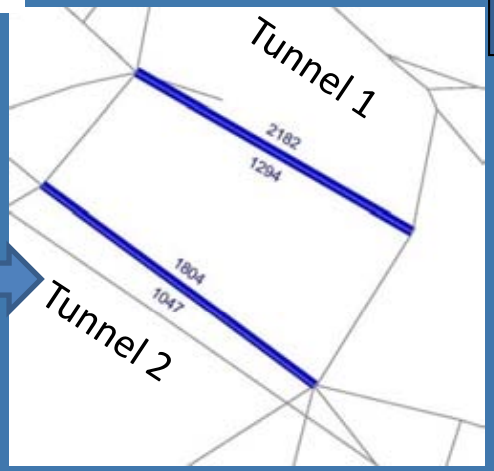
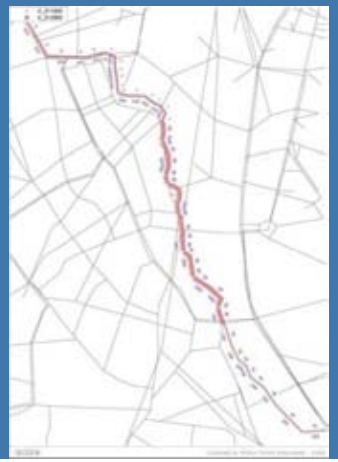
Network + Bus Augmentation

Traffic on New links -2031	
Tunnel 1 (in PCU)	: 3475
Tunnel 2 (in PCU)	: 2850
Elevated road along river (in PCU)	: 1800

Traffic Characteristics - 2031 (Network + Bus Augmentation)	
Trips assigned (Peak Hour) (motorized)	: 5.52 lakhs
Walk +Cycle	: 31%
Mode share -Two wheeler (All)	: 22%
Mode share -Car (All)	: 12%
Mode share-Auto rickshaw(All)	: 5%
Mode share - Taxi (All)	: 7%
Mode share - Public Transport (All)	: 23%
Average Network Speed	: 28.5 Kmph
Average Trip Length	: 9.0





Network + Bus Augmentation + Commuter Rail

Traffic Characteristics - 2031 (Network + Bus Augmentation)	
Trips assigned (Peak Hour) (motorized)	: 5.52 lakhs
Walk +Cycle	: 31%
Mode share -Two wheeler (All)	: 21%
Mode share -Car (All)	: 12%
Mode share-Auto rickshaw(All)	: 4%
Mode share - Taxi (All)	: 6%
Mode share - Public Transport (All)	: 26%
Average Network Speed	: 29 Kmph
Average Trip Length	: 9.0

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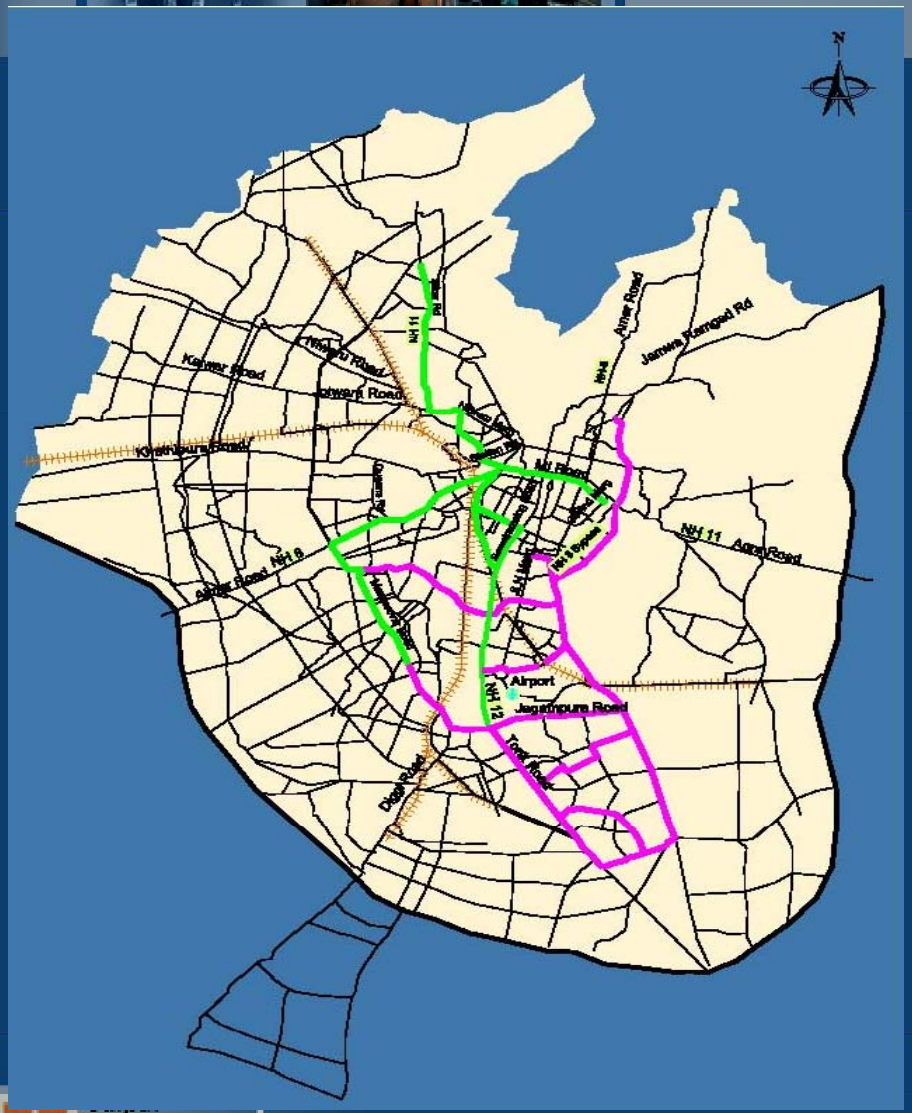
BRTS & Metro Plans



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With BRT

Traffic Characteristics - 2031 (With BRT)	
Trips assigned (Peak Hour) (motorized)	: 5.52 lakhs
Walk +Cycle	: 31%
Mode share -Two wheeler (All)	: 19%
Mode share -Car (All)	: 11%
Mode share-Auto rickshaw(All)	: 4%
Mode share - Taxi (All)	: 5%
Mode share - Public Transport (All)	: 30%
Average Network Speed	: 29.2 Kmph
Average Trip Length	: 9.2

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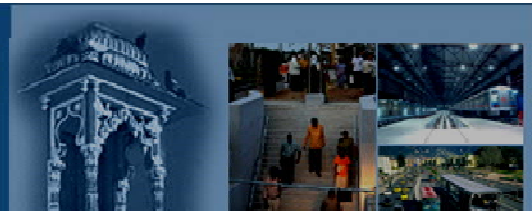
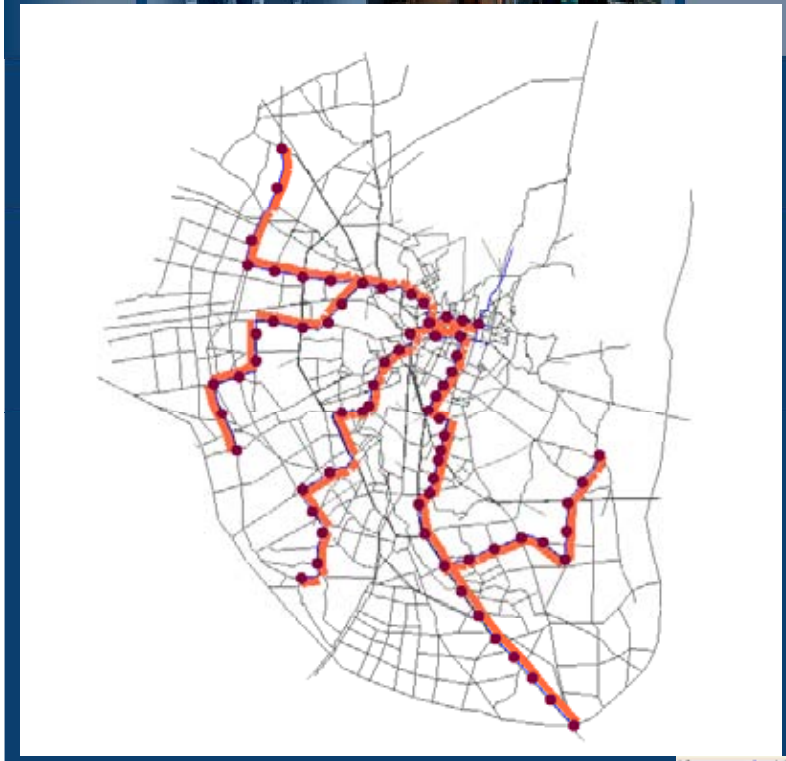


With Mass Transit System



Traffic Characteristics - 2031 (With Mass Transit System)	
Trips assigned (Peak Hour) (motorized)	: 5.52 lakhs
Walk +Cycle	: 31%
Mode share -Two wheeler (All)	: 20%
Mode share -Car (All)	: 11%
Mode share-Auto rickshaw(All)	: 4%
Mode share - Taxi (All)	: 6%
Mode share - Public Transport (All)	: 28%
Average Network Speed	: 32 Kmph
Average Trip Length	: 9.5

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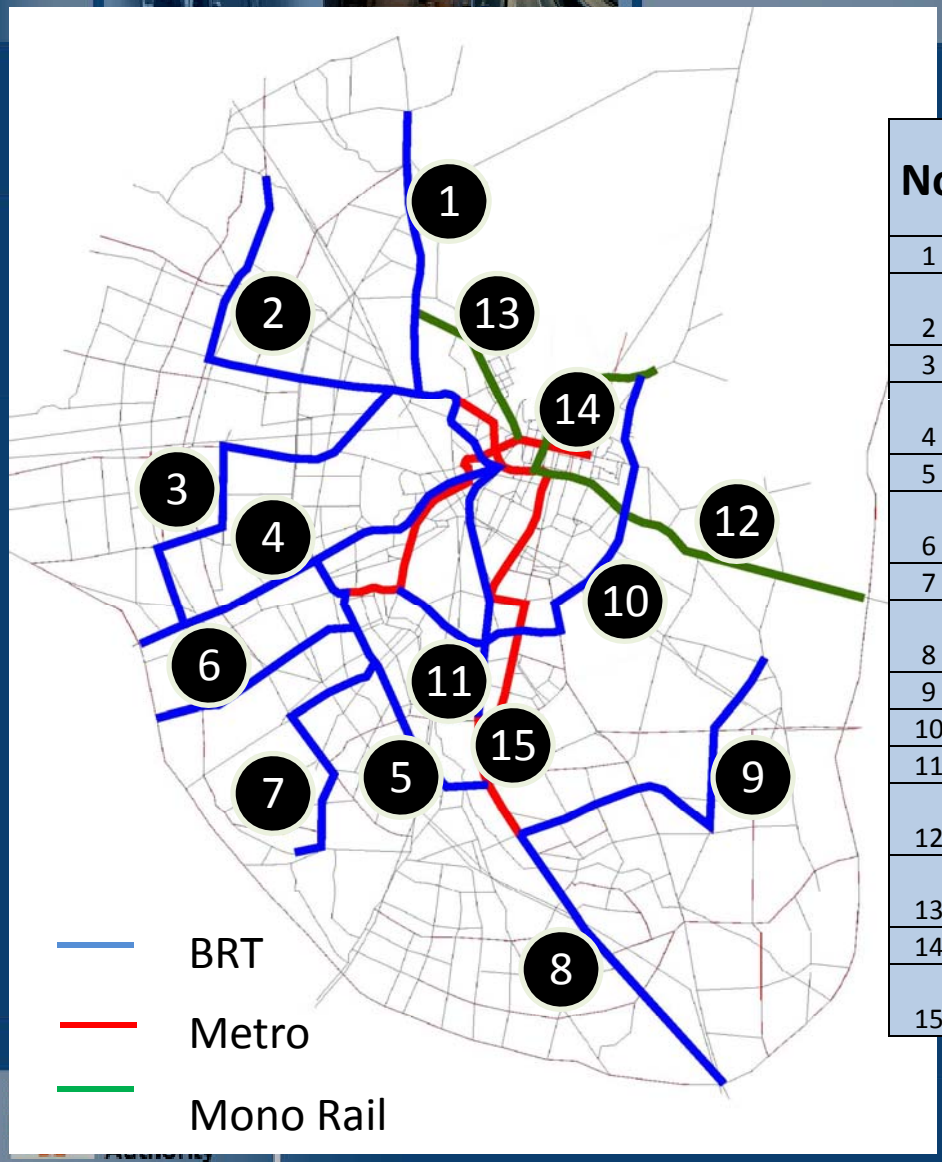
Recommended System



No	System	From	Via	To	PPHPD
1	BRT	Ring Road	Ambabari	Sindhi Camp	4200
2	BRT	Bara Kuwawali Dhani	Govindapura	Ambabari	4100
3	BRT	Ambabari	Kanakpura Rly Stn.	Ajmeer Road	3800
4	BRT	Ramnagar	Ajmeer Road	Outer Ring Road	7000
5	BRT	Ajmeer Road	Manasarovar	Tonk Road	7000
6	BRT	Manasarovar	Srinagarpura	Outer Ring Road	7000
7	BRT	Balrampura	Rampura	Girdhari Pura	3600
8	BRT	Sheopura	Tonk Road	Outer Ring Road	4800
9	BRT	Tonk Road	Sheopura	Khori	3400
10	BRT	Atish Nagar	Durgapura Rly Stn.	Amer	7800
11	BRT	Sindhi Camp	Lalkothi	Durgapura	4900
12	Monorail	Amer	Transport Nagar	Outer Ring Road	18400
13	Monorail	Chandpole	Shastri Nagar	Muralipura Jn.	11700
14	Metro	Badi Chopar	Railway Station	Manasarovar	26000
15	Metro	Water Works Road	Ajmeeri Gate	Sheopura	22000

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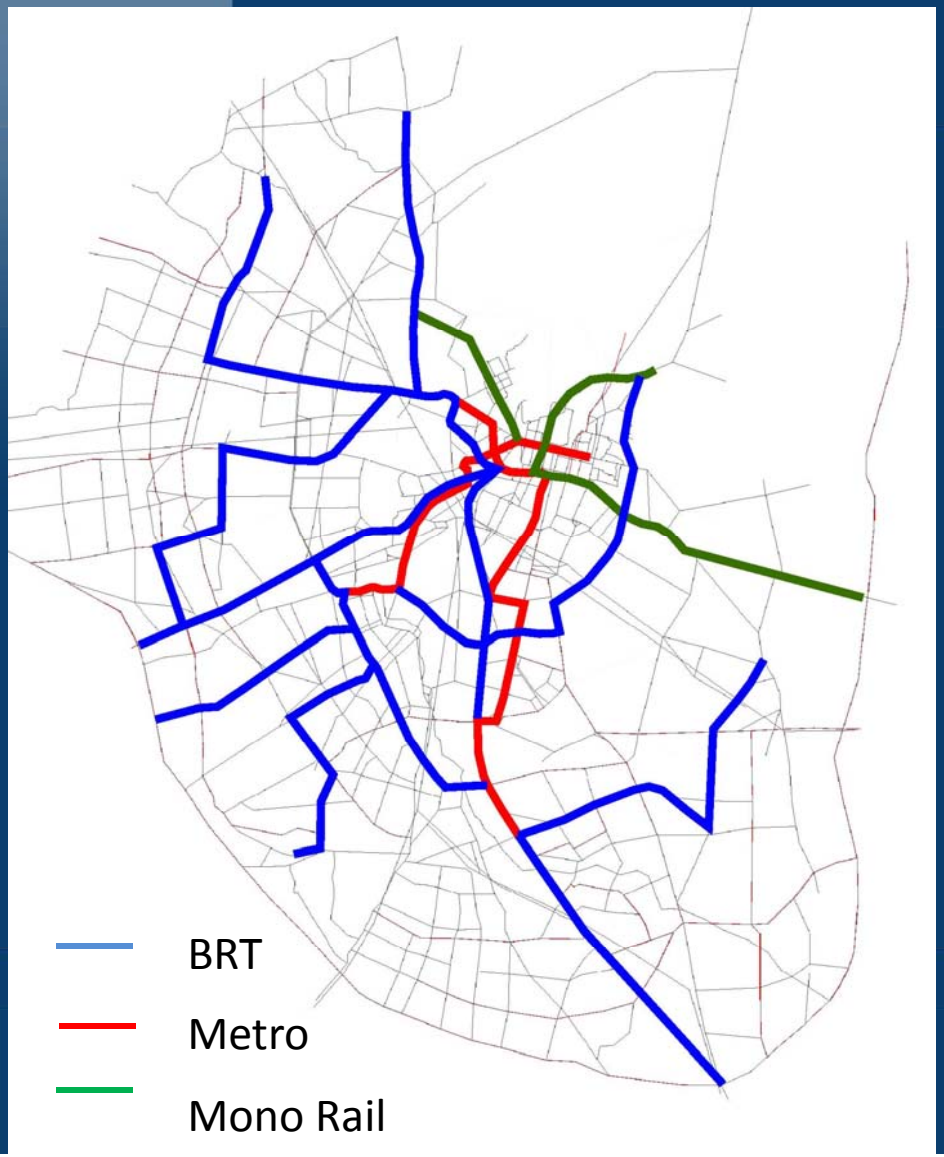
Recommended Systems



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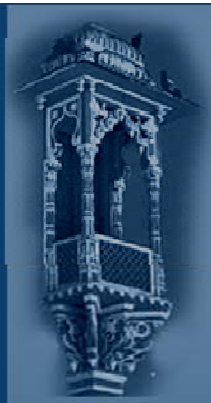
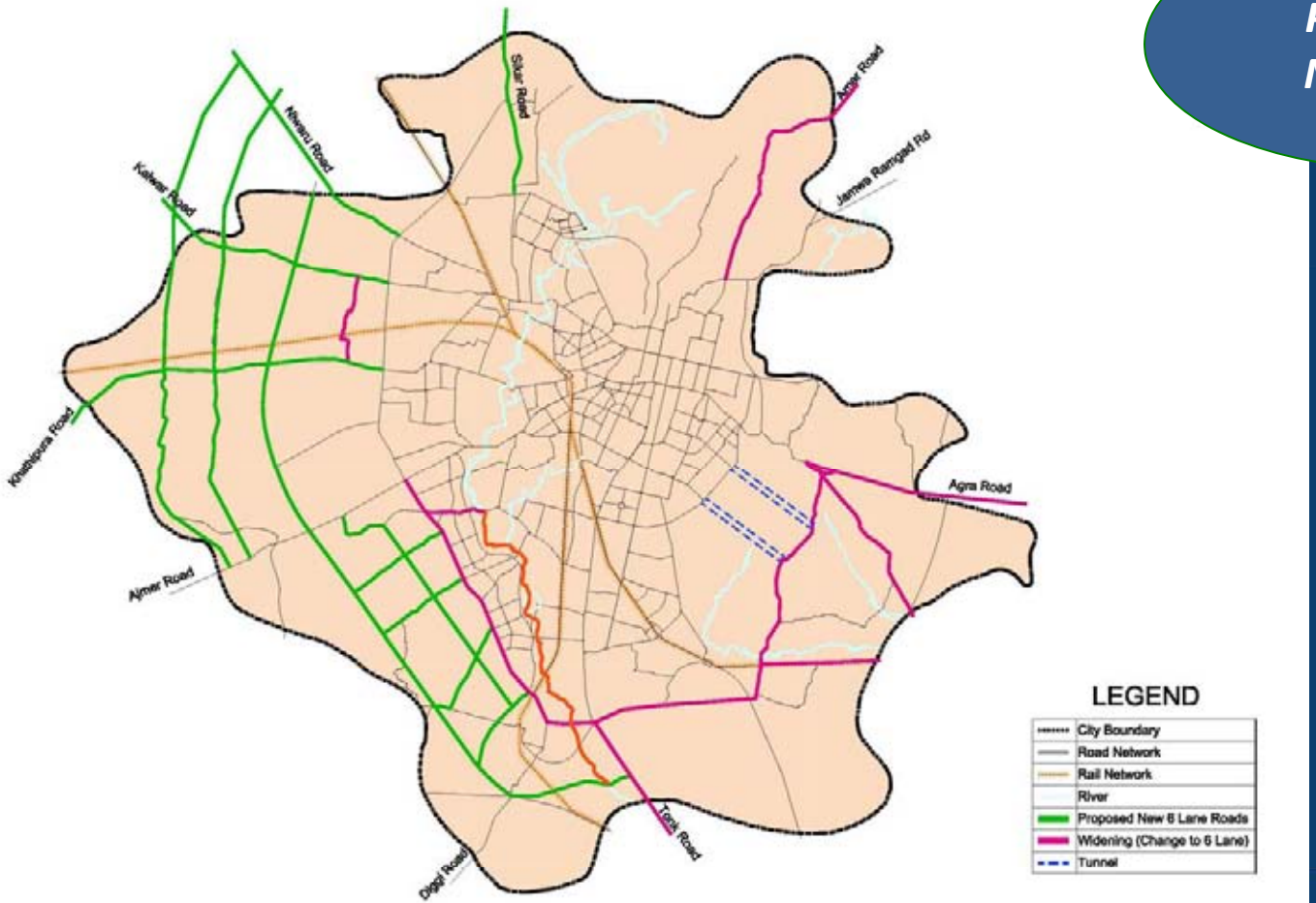


Travel Characteristics

	2031					
Travel Charecteristics	Do Nothing	Network+Bus Augmentation	Network+Bus Augmentation + Commuter rail	+BRT	+Metro	All
Public Transport Share	10%	23%	26%	30%	28%	35%
Average Trip Length(Km)	7.9	9	9.0	9.2	9.5	9.5
Average Network Speed(Kmph)	14	28.5	29	29	32	32

Mobility Plan Elements

Proposed New Links



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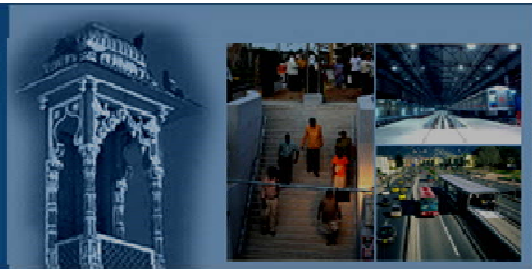
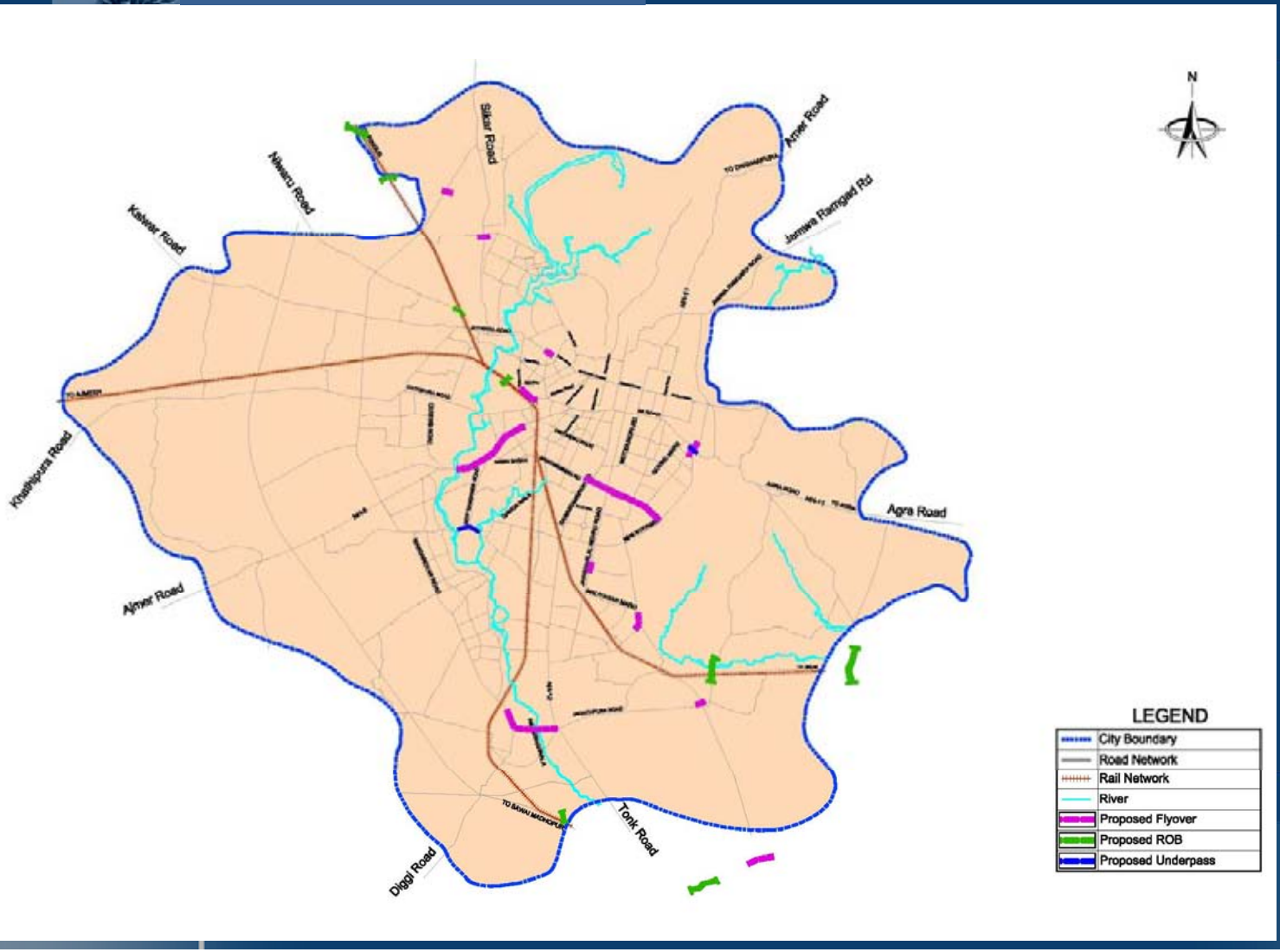


Mobility Plan Elements

Proposed ROB's & RUB's



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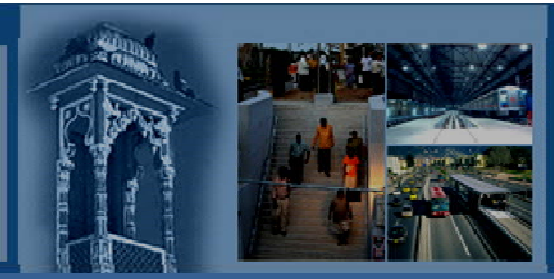
The Mobility Plan

BUS FLEET ENHANCEMENT

- *Existing fleet strength is 1440. Additional fleet requirement is approximately 160 Buses for the present situation.*
- *For 2031, the bus fleet requirement will be around 4000*
- *The bus fleet augmentation should focus bus technology as modern vehicles have direct impact on speed, capacity, environmental friendliness and comfort.*
- *ROUTE RATIONALISATION of the existing and new bus routes*



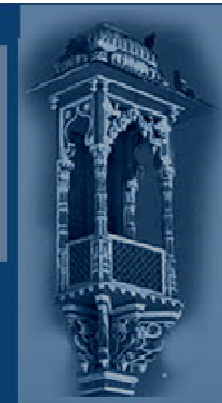
The Mobility Plan

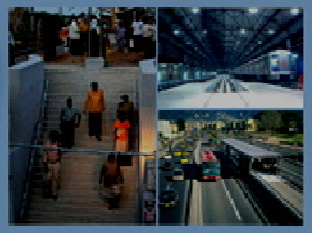
Proposed Pedestrian Subways / FOBs

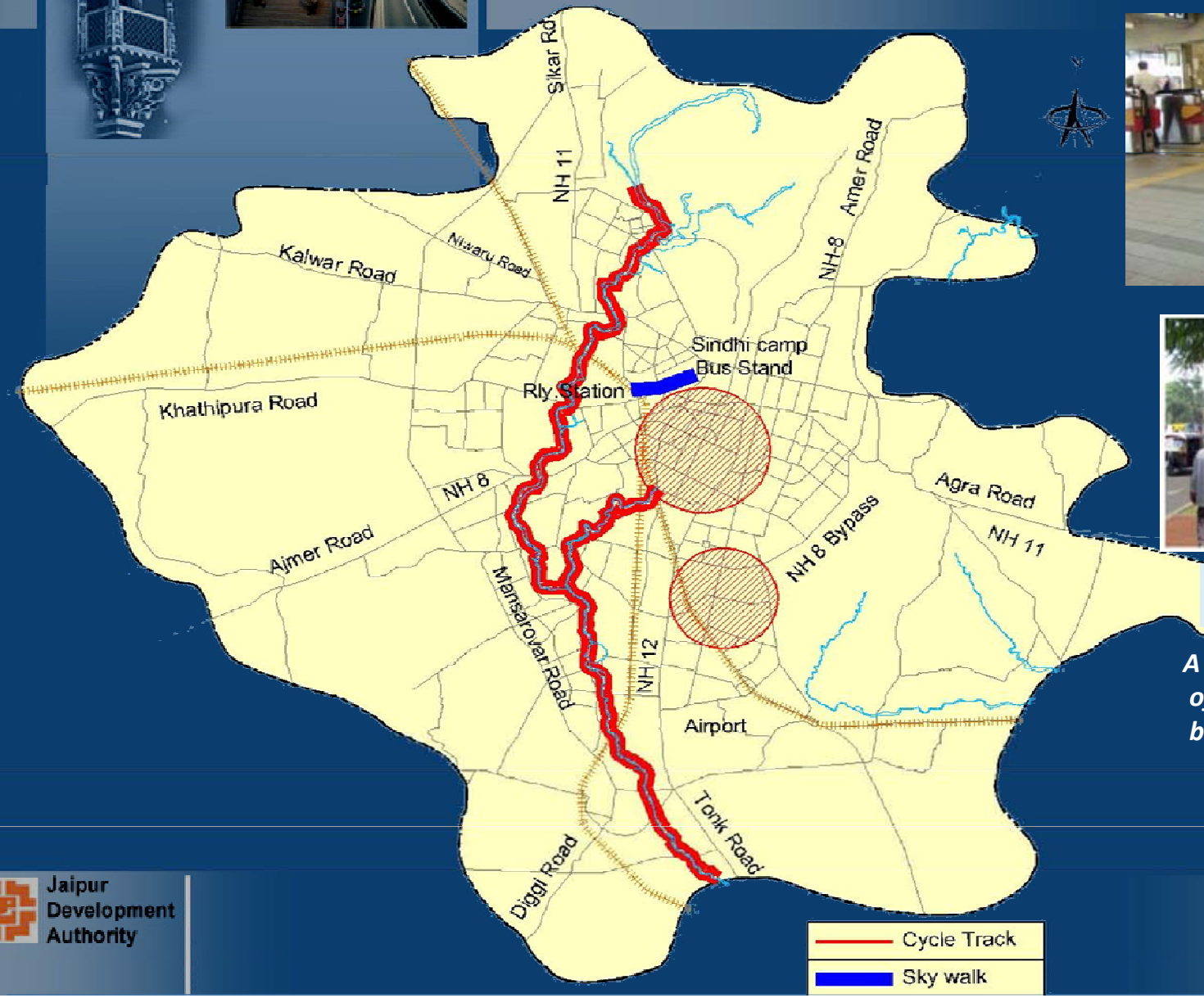
NMT Plan

1. *Railway Station Road*
2. *Kasakothi Junction*
3. *Chandpol Bazaar*
4. *Chhotti Chaupar*
5. *Badi Chaupar*
6. *G.P.O Junction*
7. *Ajmeri gate Junction*
8. *Sanganeri Gate Junction*
9. *Ghat Gate Junction*
10. *Transport Nagar Junction*
11. *Sanganer Airport Junction*

Cycle Track & Skywalk







Footpath

A minimum usable width of 1.5 meters should be provided for footpath.

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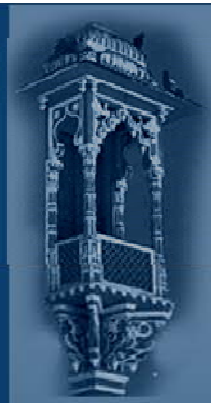


Core Area Schemes

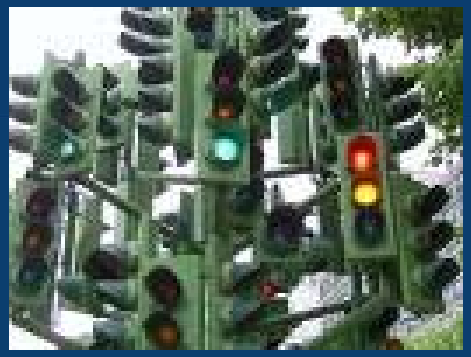
- Parking Improvement
- Traffic Management
- NMT Plan
- Hawkers & Encroachment s

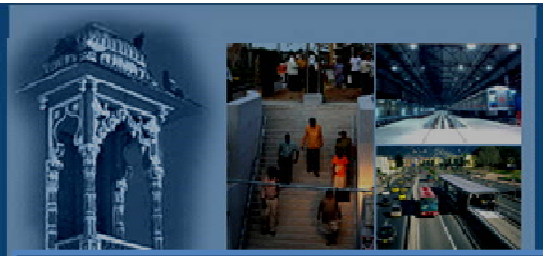
The Mobility Plan

Traffic Management Plan

- *Junction improvements*
- *Area Traffic Control Systems*
- *Traffic Management Measures*
- *Safety Measures*
- *Parking Management Plan*

Traffic Management Measures





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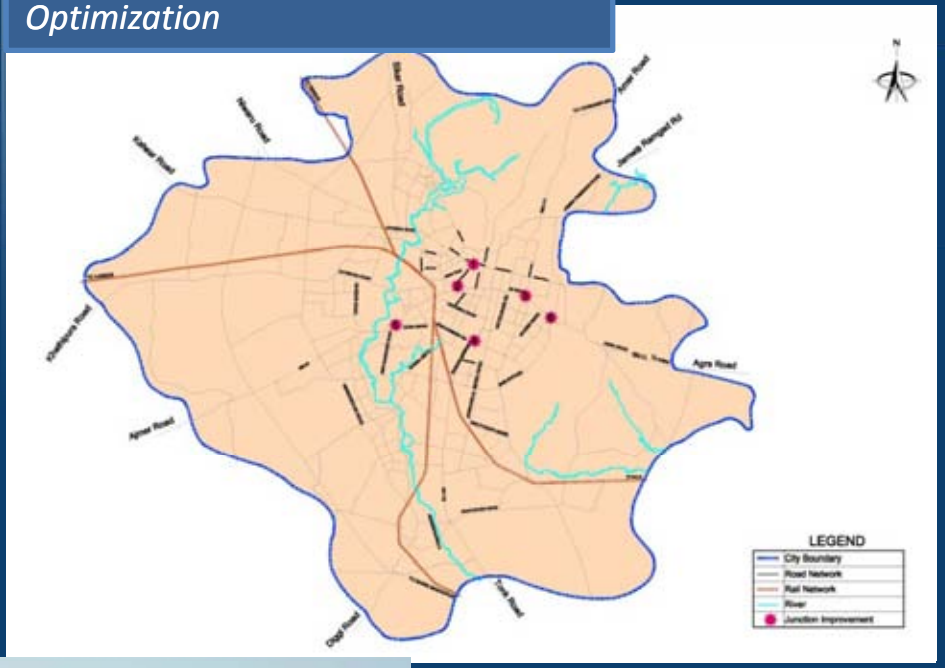
Junction Improvements

Signal Coordination and Optimization



- ***Khasakoti Junction***
- ***G.P.O Junction***
- ***Ghatgate Junction***
- ***Rambagh Circle***
- *Sodala Junction*
- *Transport Nagar Junction*

Traffic Management Measures

Junction Improvements

Pavement Markings & Signage

- ***Traffic control facilities such as: Center line, Traffic lane lines, Stop lines, Pedestrian crossings, Parking space limits, Kerb marking for visibility, Obstruction marking etc. must be provided keeping in view all users of the road and especially for night time driving.***

- ***All the traffic signs should be facilitated as per the guidelines provided in IRC publication 67-2001.***

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The Mobility Plan

Parking Management Plan

Traffic Management Measures

Off-Street Parking Locations

1. Near G.P.O Juction
2. Near Chaugan Stadium
3. Dayanand Marg

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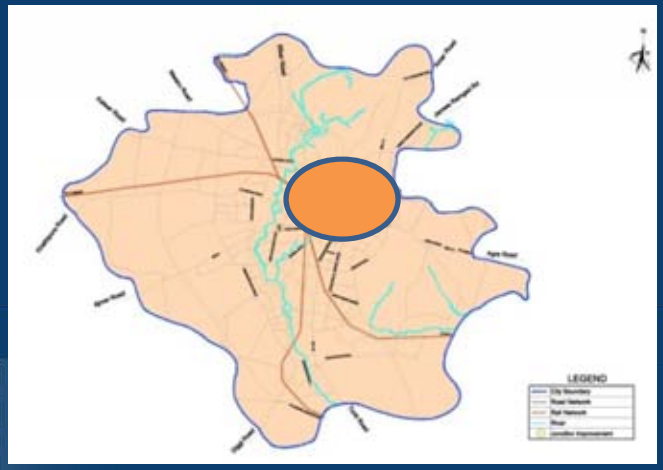
Traffic Management Measures

Area Traffic Control Systems

- The Area Traffic Control Systems shall link various elements of Intelligent Transportation Systems
- Will enable decision makers to identify and react to an incident in a timely manner based on real-time data.
- The ATC will help reduce incident response times, disseminate traveler information and hence reduce congestion and enhance safety



Safety Measures

- Black spots must be identified along the major roads and specific improvements must be proposed at those locations.
- All speed breakers and humps be marked and signed adequately for night time visibility
- All traffic signages be made retro reflective
- Create traffic safety patrol programs for student volunteers at all schools
- Install pavement markings such as lane lines, median lines, stop bar, parking stalls/bays etc
- Ensure that adequate street lighting is provided
- Set up a Road Accident Analysis System

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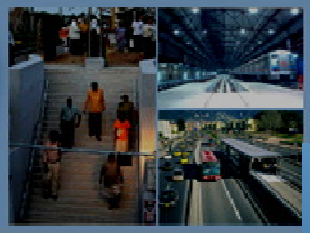
Freight Movement Plan



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The Mobility Plan

Travel Demand Management

Congestion Pricing

- *To reduce vehicular travel demand and congestion, a congestion charging policy can be introduced within the Central areas of Jaipur.*
- *The congestion operating hours can be taken as from 10:00 AM to 7:30 PM, Monday through Friday, excluding public holidays.*
- *A stipulated fee can be charged as congestion charge for those driving within the restricted central area.*

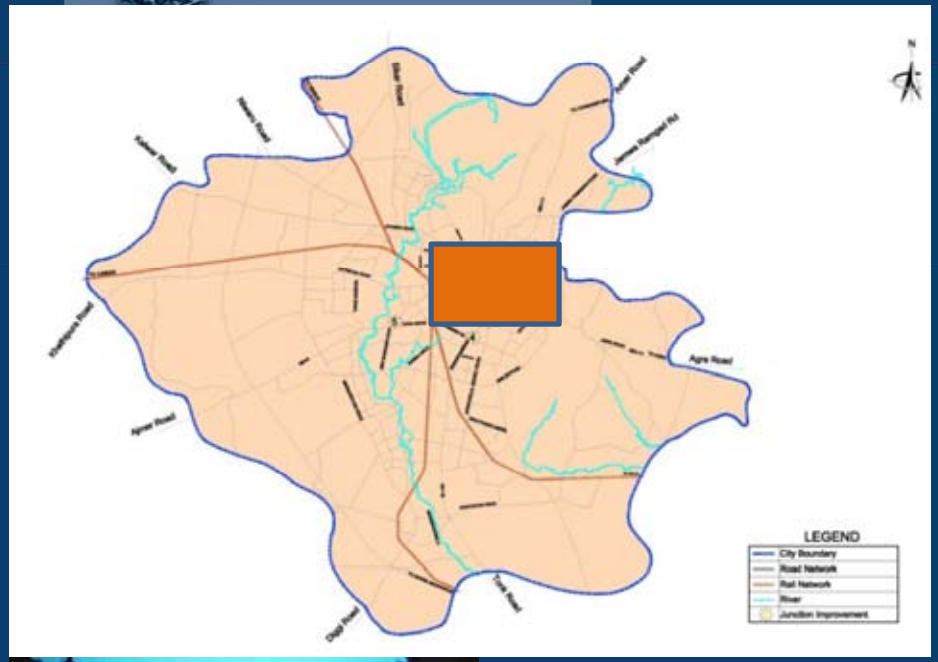
Parking Control

- *Car-free streets*
- *Cordon controls on entering a particular area*
- *Odd/ even schemes and variations based on number plates.*
- *The areas that should be considered for parking control include Chanpol Bazaar, Ramganj Bazaar, Johari Bazaar Kishonpol Bazaar .*

The Mobility Plan

Encroachment & Hawker Management

Other Plans



Green Zone:. Allow hawkers to do their business at all the times without any restrictions. The locations around the market areas generally are designated as Green Zones

Amber Zone: Some restrictions for the vendors and hawkers.

- *These restrictions could either be by time of the day, or by the day of the week.*
- *On all other times, vending is allowed at designated areas.*

Red Zone: Hawking/vending are not allowed at these designated areas at any time.

- *The zones identified as Red Zones will always prohibit hawkers.*
- *All the busy corridors of the town, will come under the cover of Red Zone, and hence, are hawker-free zones.*

Authority

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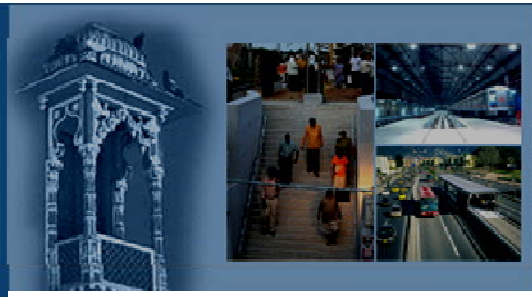
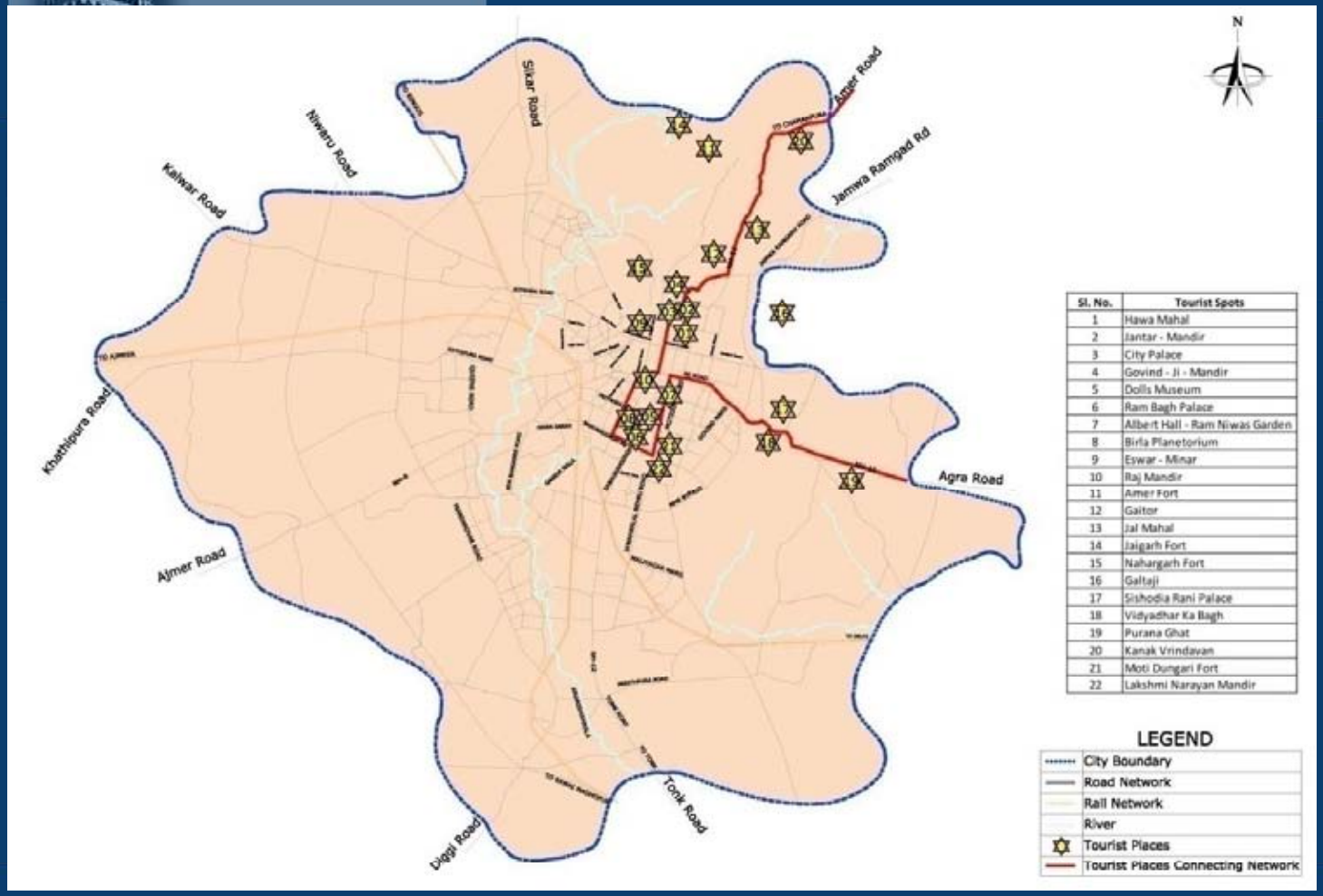
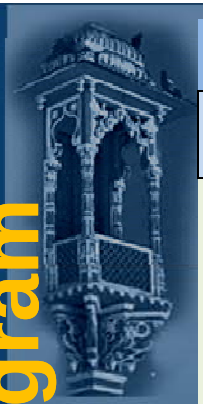


Tourist Monorail Corridor



Sl. No.	Tourist Spots
1	Hawa Mahal
2	Jantar - Mandir
3	City Palace
4	Govind - Ji - Mandir
5	Dolls Museum
6	Ram Bagh Palace
7	Albert Hall - Ram Niwas Garden
8	Birla Planetorium
9	Eswar - Minar
10	Raj Mandir
11	Amer Fort
12	Gaitor
13	Jal Mahal
14	Jaigarh Fort
15	Nahargarh Fort
16	Galtaji
17	Sishodia Rani Palace
18	Vidyadhar Ka Bagh
19	Purana Ghat
20	Kanak Vrindavan
21	Moti Dungari Fort
22	Lakshmi Narayan Mandir

Investment Program



Investment Category		Quantity	Unit Rate in Rs.Crores	Total in Rs.Crores	Phasing			PPP Potential
Public Transport Improvement					2010-2015	2015-2020	2020 and Beyond	
	Bus Fleet Augmentation	2600	0.4	1040	50	300	430	0
	Metro Rail	28	250	7000	3000	4000		0
	BRT	100	12	1200	400	400	400	450
	Intermodal Stations	4	10	40	20	20		40
	Tourist Monorail	11	90	990	2000			500
	Terminals Improvements	2	10	20	20			20
Augmentation of Roads								
	Grade separators & ROBs	17	20	340	340			0
	Rd Widening – 4laning	200	2	400	200	200		0
	~~Rd Widening – 6laning~~	~~30~~	~~4~~	~~120~~	~~60~~	~~60~~		~~0~~
	New Roads (4 lane)	60	4	240	120	120		0
	Ring Road	80	12	960	960			960
	Tunnels	2	400	800		400	400	0
	Riverside Road	50	30	1500		1500		200
Non Motorised Transport								
	Bike lane	160	1	160	160			0
	Foot Path cum drains	200	0.45	90	200			0
	Pedestrian FoB	11	1	11	11			5
Traffic Management								
	Major Jct Improvements	6	0.25	1.5	6			0
	Area Traffic Control	LS		50	50			0
	Signages and Road Markings	LS		5	5			0
	Total			14,968	7,602	7,000	1,230	2,175
	PPP Potential			2675	2155	370	150	
				18%	28%	5%	12%	
Financing		NURM		7,484	3,801	3,500	615	
		PPP		2,675	2,155	370	150	
		State		4,809	1,646	3,130	465	

Jaipur Development Authority

Institutional Framework

Central Planning

Functions: Coordination

Regulator

Functions: Safety & License

MC | **JDA** | **GoR** | Police | DTCP | DMRC

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End of Presentation

Thank You

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