

Road Safety in Delhi Issues and Solutions

Anil Shukla, IPS Joint Commissioner of Police: Traffic, Delhi

Indian Roads are most dangerous in the world

Times of India

India leads world in road deaths

13 Indians Die Every Hour Due To Accidents, Many Cases Not Reported

Dipak Kumar Dash | THH

New Delhi: In a dubious distinction for the country, the World Health Organization has revealed in its first ever Global Status Report on Road Safety that more people die in road accidents in India than anywhere else in the world, including the more populous China.

Calling road fatalities an "epidemic" that will become the world's fifth biggest killer by 2080, the report said while rich nations had been able to lower their death rates, these were sharply on the rise in the third world. It said 90% of deaths on the world's roads occur in low and middle-income countries (21.5 and 19.5 per lakh of population, respectively) though they have just 48% of all registered vehicles.

The statistics for India are chilling. At least 13 people die every hour in road accidents in the country, the latest report of the National Crime Records Bureau reveals. In 2007, 1.14 lakh people in India lost their lives in road mishaps — that's



significantly higher than the 2006 road death figures in China, 89,455.

Road deaths in India registered a sharp 6.1% rise between 2006 and 2007. However, road safety experts say the real numbers could be higher since many of these accident cases are not even reported. "There is no estimate of how many injured in road accidents die a few hours or days after the accident," points out Rohit Baluja, member of the UN Road Safety Collaboration and Commission of Global Road Safety representing Asia.

The report, based on 2006 and 2007 statistics collected from 178 participating countries, said globally over 1.2 million people die in road accidents every year and 20-25 million people suffer non-fatal injuries.

Baluja said both central and state governments, while pushing for construction of more highways and roads, were doing precious little to make them safe. "We don't have scientific traffic engineering which forms the basis of road safety improvement practised in US and UK since 1980s. This still remains a matter of consultancy in India as we are yet to have our own traffic engineering wings," Baluja adds.

In fact, the report shows while only 3,298 people died in road accidents in UK in 2006, the figure, at 42,642, was much higher in the US.

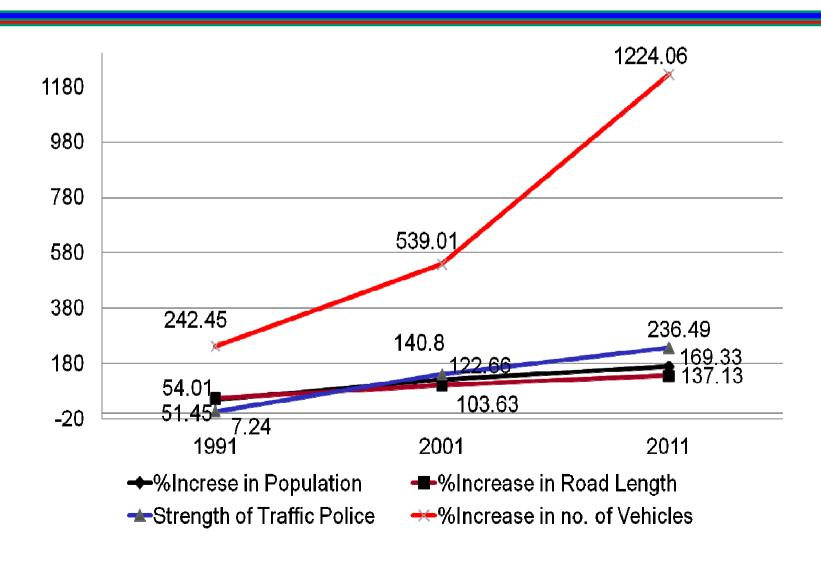
►Speeding main reason, P 8

Growth in Delhi

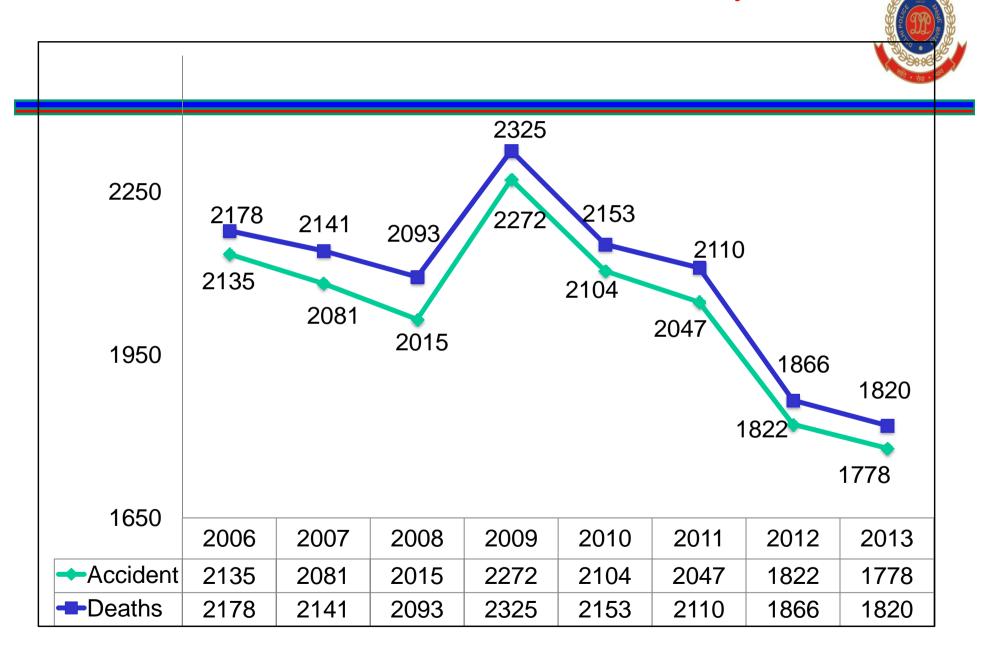


Year	Population	Registered motor vehicles	Road length (in KMs)	Traffic Police Strength
1991	93,70,00	19,23,787	22,487	1,849
2001	1,38,50,507	35,89,748	28,508	4,181
2013	1,71,74,897	81,43,235	33,198	5,834

Growth in population, roads & vehicles

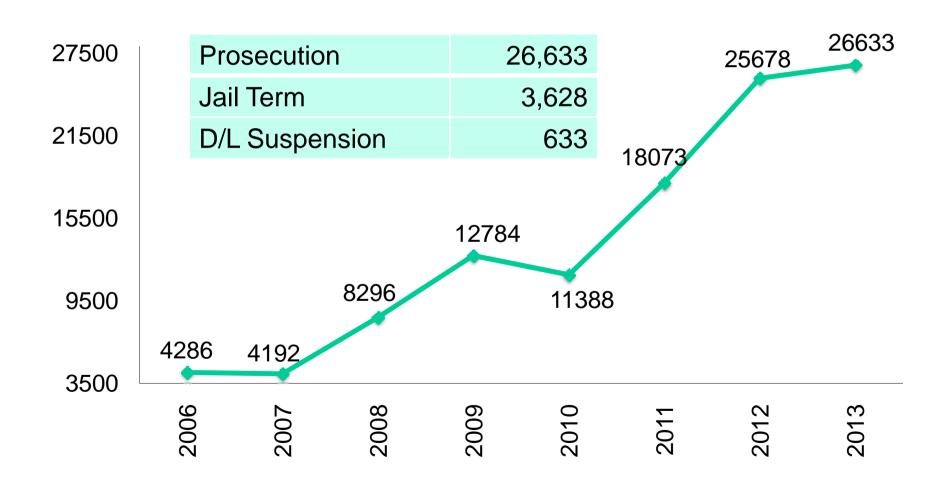


Lowest fatal accidents and deaths in 10 years



Drunken Driving





Increase in signalized junctions



Year	Signalized junctions
2007	1037
2010	1119
2013	1199
2014 (Till now)	1251



LAST FIVE YEARS.

10,023 FATAL ACCIDENTS.

VICTIMS HAVE BEEN

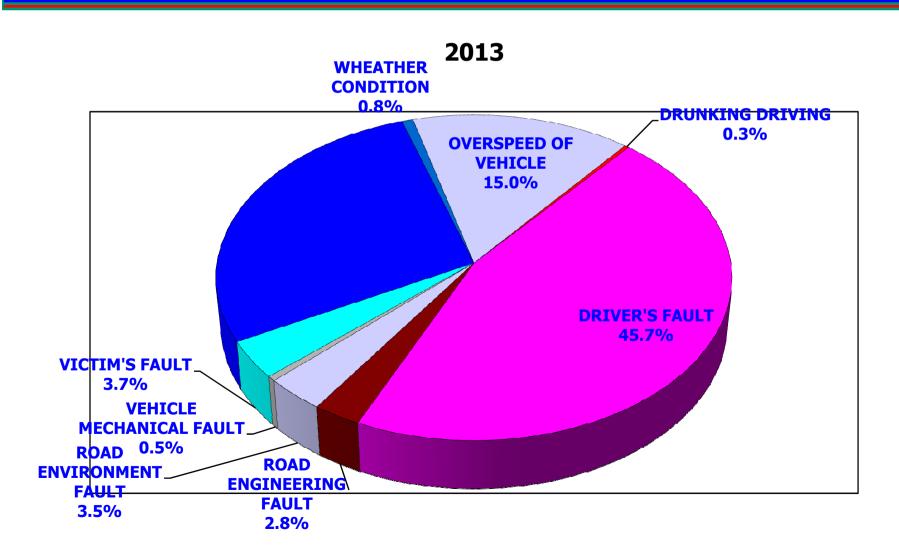


- ❖ PEDESTRIANS OVER 4500
- **❖ TWO WHEELERS OVER 3000**
- **❖ CYCLIST AND CYCLE RICKSHAW OVER 700**
- **❖ AND CARS OVER 300**

THE FIRST THREE COMPRISE 85% OF THE VICTIMS

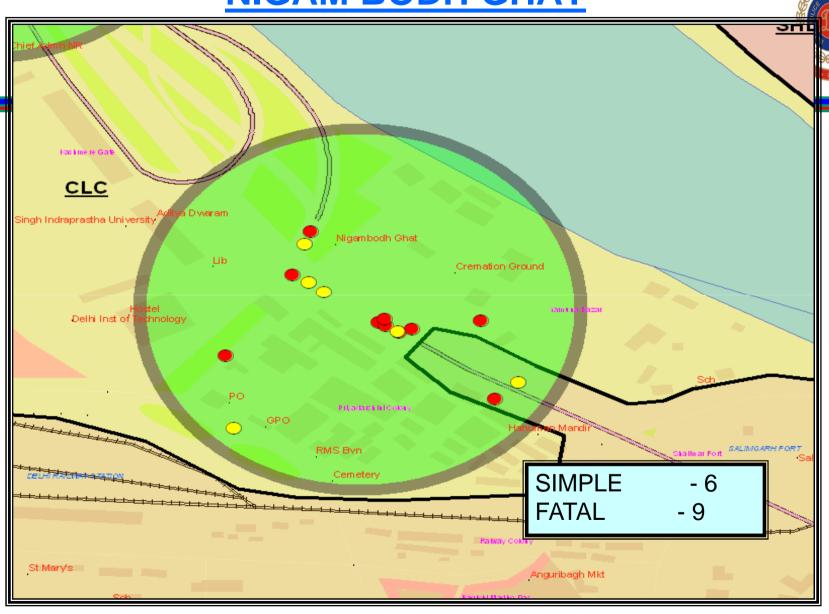
CAUSES OF ACCIDENTS



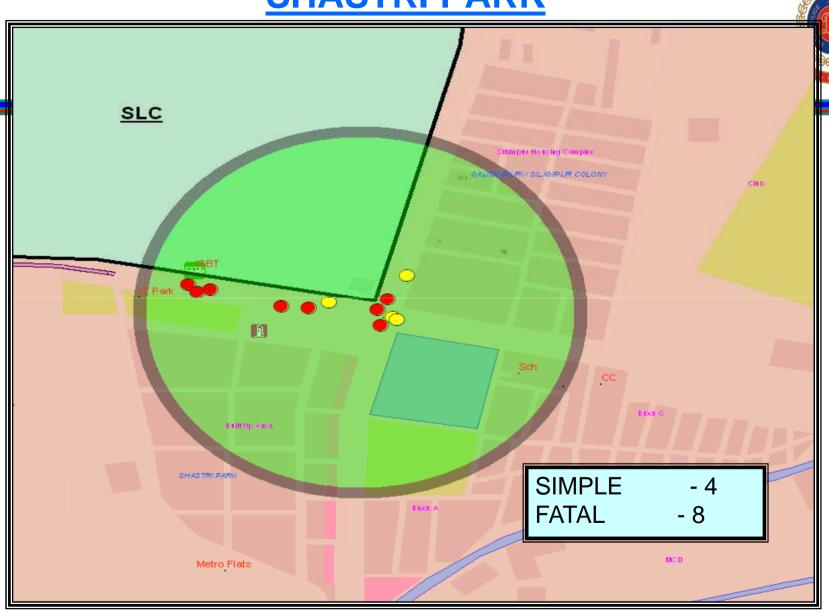


ACCIDENT PRONE ZONES ACCIDENT_PRONE_ZONE_12 938. SWAROOP NAGAR SNO, NAME 939. HAIDER PUR 1, ITO 40. DHAULA KUAN 2, RAJ GHAT 41, SANJAY T-POINT 3. DHARAMPURA RED LIGHT 42. HYAAT HOTEL 4. KANTI NAGAR 43, MAHIPAL PUR FLYOVER 5, SEELAMPUR T POINT 44. SHIV MURTI NWD 6. SHAKAR PUR CHUNGI 45. KHANPUR T POINT 7. AKSHARDHAM MANDIR 46. AIIMS 8. NEAR GAJIPUR RED LIGHT 47. MOOL CHAND 9. NEAR MURGA MANDI 48, MODI MILL F/OVR 0 10 RED LIGHT MV-II 49. NEHRU PALACE 11. ANAND VIHAR ISBT 50, OKHLA IND.AREA PH-1 12. KARKARI MORE 51. OKHLA MORE NED (13, GOKALPURI 52. ROUND ABOUT OKHLA ESTATE MARG 14. KHAJOORI CHOWK 53. ASHRAM CHOWK 15, SHASTRI PARK 54. GHITORNI RED LIGHT WD 16. BURARI CHOWK 55. ALI VILLAGE 17, ISBT K GATE 56. SARITA VIHAR FLYOVER 18, MONESTY RING ROAD 57. FIRE STATION SEC-6 9. MUKHAND PUR CHOWK 58, SEC-1,2 RED LIGHT 20. NIGAM BODH GHAT 59, RADISSON HOTEL 21, WAZIRABAD 60, RAJOKARI FLYOVER 22, BRITANIA CHOWK 61. GANESH NAGAR 23, DEEPALI CHOWK 62. UTTAM NAGAR METRO STATION 24, MADHUBAN CHOWK SWD 63. BRAR SQUARE 25, SHAKUR PUR RED LIGHT 64. BRAR SQUARE U-TURN 26, WAZIR PUR DEPOT 65 MAYAPURI CHOWK 27. BARWALA CHOWK 66, NARAINA 28, SEC-23 PETROL PUMP 67, METRO STATION MADIPUR 9, AZAD PUR CHOWK 68, MULTAN NAGAR RED LIGHT 930. BHALSWA CHOWK 9. METRO STATION PASCHIM VIHAR 31, MUKHARBA CHOWK 70. PEERA GARHI CHOWK 32, HANUMAN MANDIR BUDPUR 33, CNG PUMP SANJAY GANDHI TPN 71, PUNDADI D. 71, PUNJABI BAGH CHOWK 34, KHAMPUR VILLAGE 73. ESI HOSPITAL 95, LIBAS PUR BUS 74, RAJOURI GARDEN 96. NANGLI BUD PUR VILLAGE 937. SAI BABA MANDIR

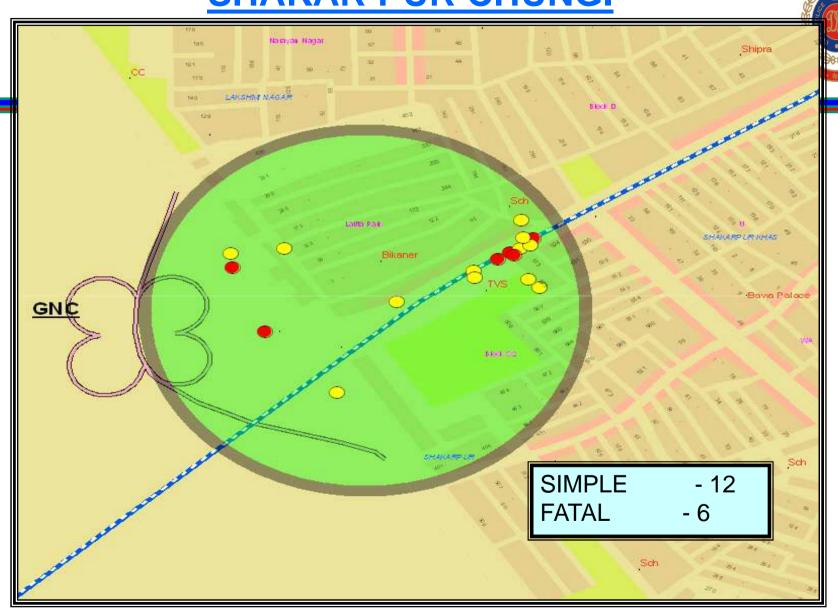
NIGAM BODH GHAT



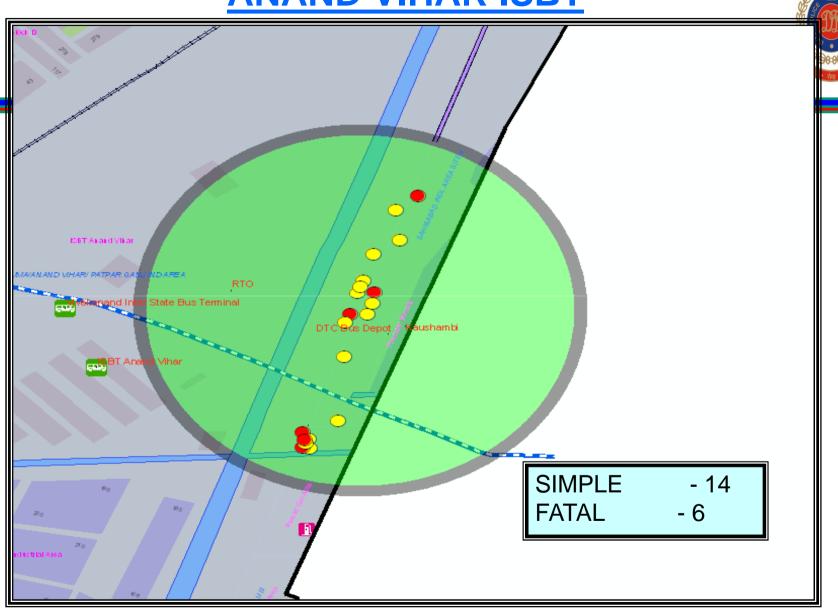
SHASTRI PARK

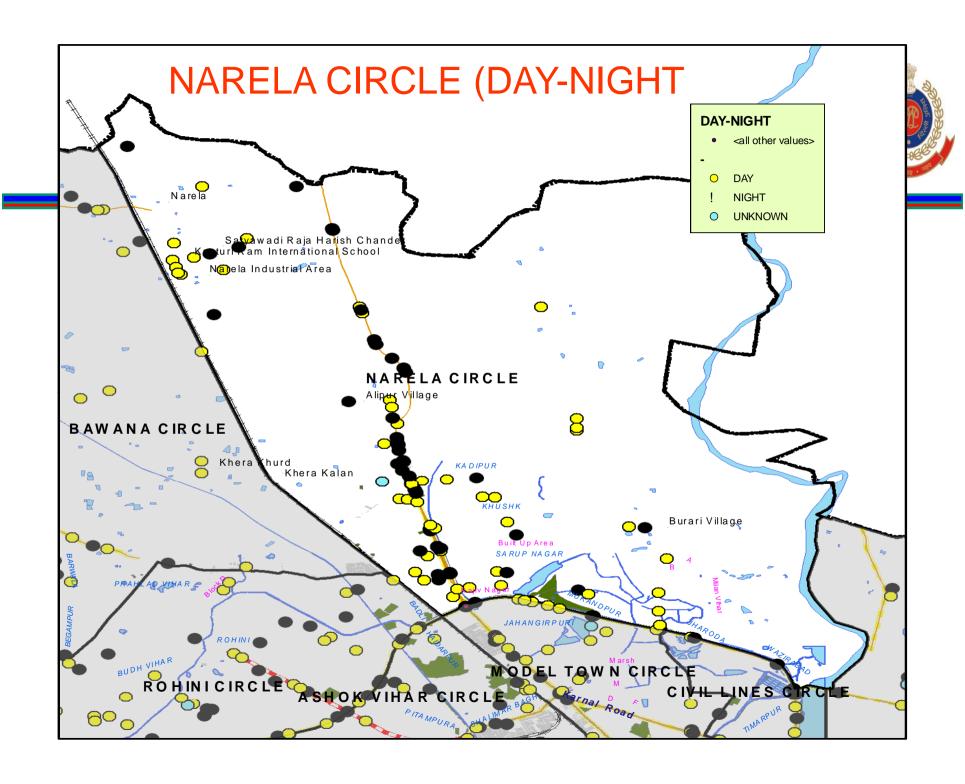


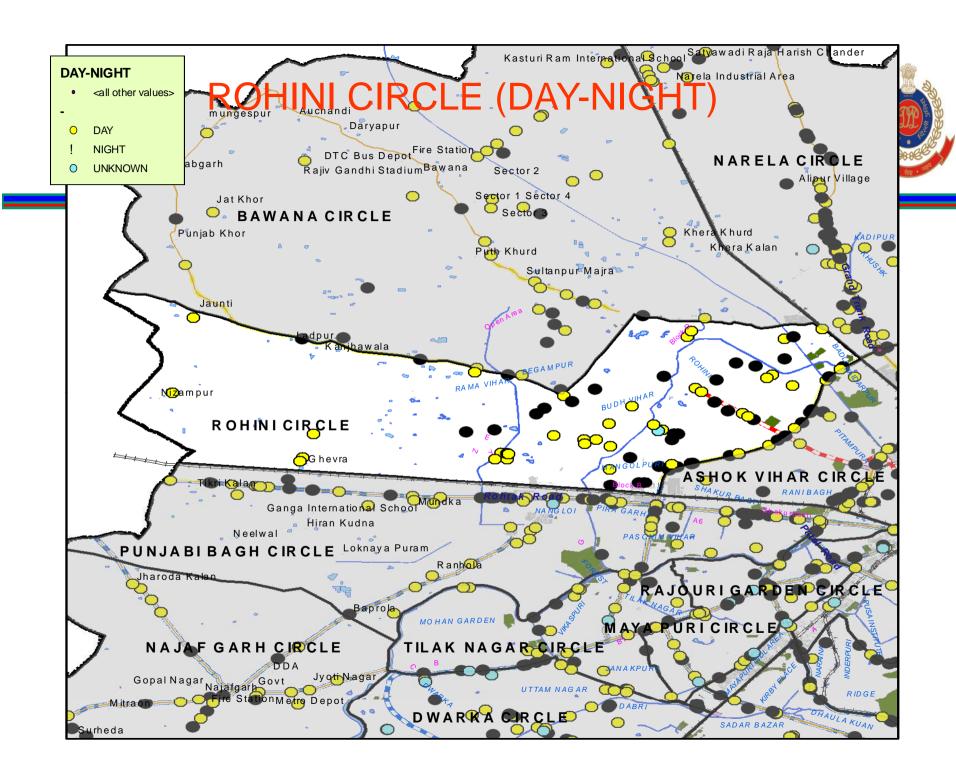
SHAKAR PUR CHUNGI



ANAND VIHAR ISBT



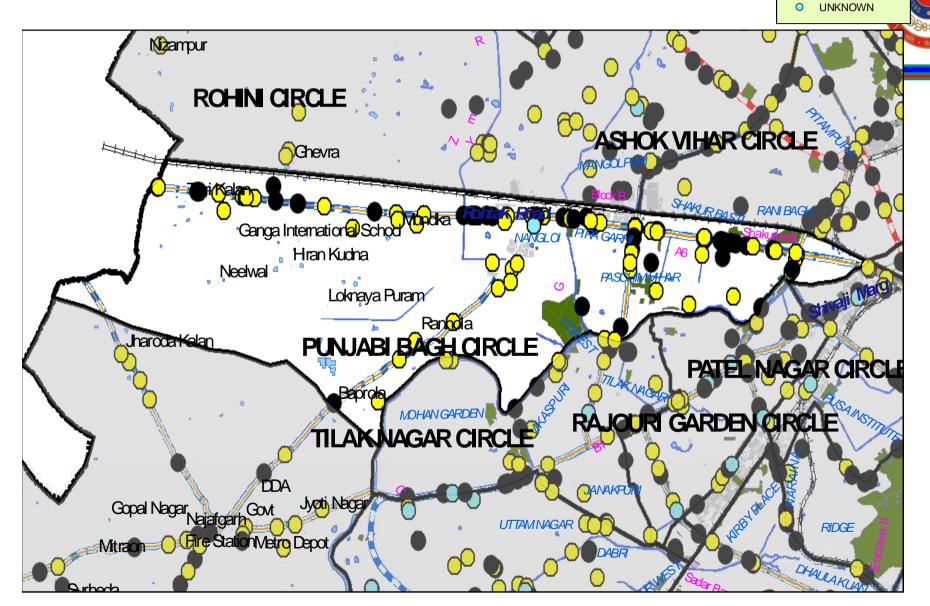


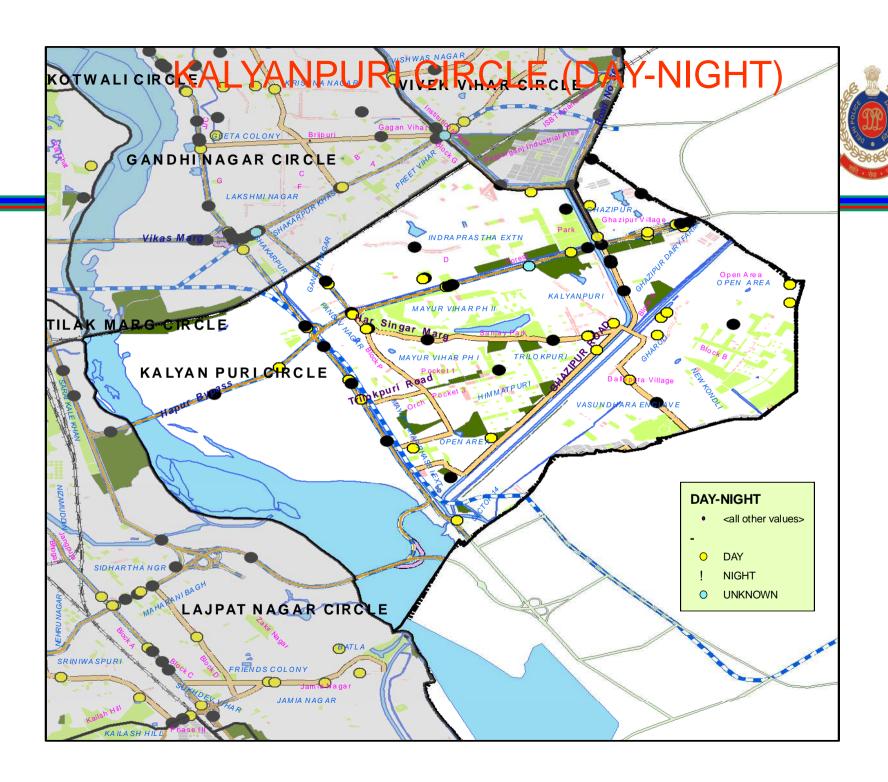


PUNJABI BAGH CIRCLE (DAY-NIGHT)

DAY-NIGHT

- <all other values>
- -
- O DAY
- ! NIGHT

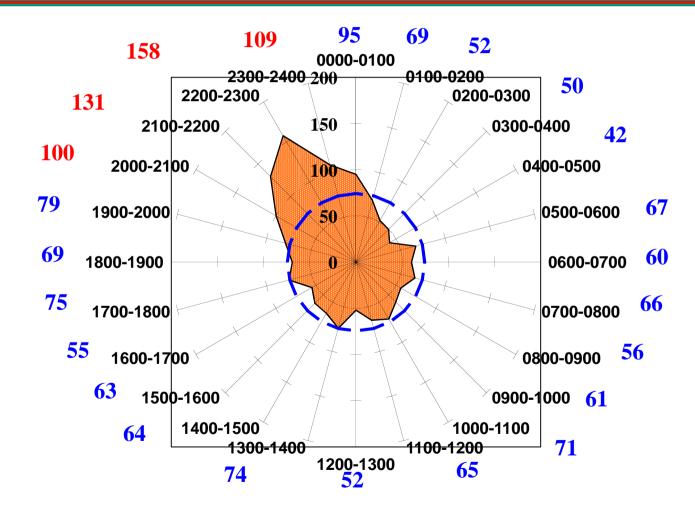




TIME -WISE FATAL ACCIDENTS







Major Black Spots



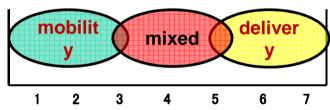
- ✓ Shastri Park
- ✓ Shakar Pur Chungi
- ✓ Nigam Bodh Ghat
- Mukund Pur Chowk
- Punjabi Bagh Chowk
- Ashram Chowk
- Mahipal Pur Flyover
- ✓ Seelam Pur T-Point
- ✓ Hanuman Mandir Budhpur
- ✓ Britannia Chowk

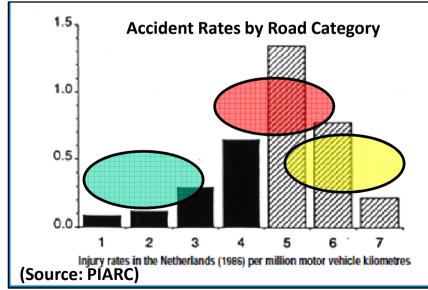


What is needed?

1. Basic Approach to Road Safety (2/4)

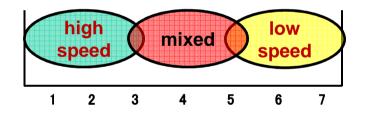
When the functional use of road network is mixed (mixed function), accident rates become higher.
Functional Use





P When the homogeneous use of road network is low (mixed traffic), accident rates become higher.

Homogeneous Use



	Road Category	Speed (km/h)
1	Motorway	100-120
2	Express Road	100
3	Arterial Road	80
4	Local Road	80
5	2 nd Arterial Road	50
6	Residential Road	50
7	Residential Street	8-30

Road Safety Audit



- ✓ Of slopes
- ✓ Embankments
- ✓ Road curvatures
- ✓ Road surface
- ✓ Line of sight
- Angle of intersections
- ✓ Cuts in central verges
- ✓ Need for FOBs/Subways

Driver guidance mechanism



- ✓ Is improved through
 - Reflectors
 - Luminescent Road Markings
 - Signages
 - Road studs, Cats eyes, reflective bollards

Initiatives



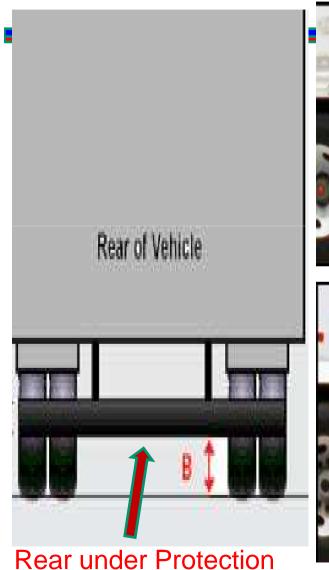
✓ Education

✓ Regulation

✓ Enforcement measures

✓ Road Engineering measures

Rear under protection device











Side under Protection



Education



- Road Safety Cell Programmes.
- School Children.
- Commercial Drivers.
- Cyclists.
- Pedestrians.
- Two Wheelers.
- Advertisement Campaign.
- Obtaining feedback

Engineering



Speed Calming

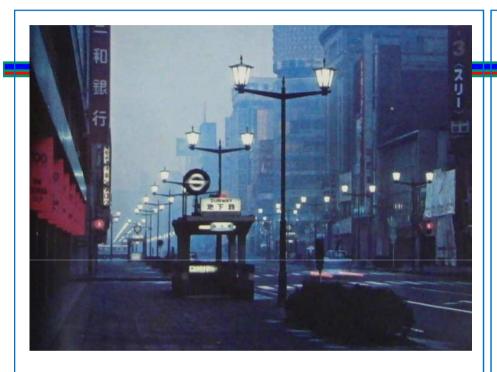
- Mastic rumblers, thermoplast strips, speed breakers, pseudo speed breakers,
- Nose Protection
- Reflective Gadgets
 - Cats eyes, road blinkers, thermoplast road markings (480 junctions), reflective bollards etc.
- Cautionary Signages
- Repair of broken central verges
- Central verge grills

Engineering



- ✓ FOBs, Subways etc.
- Heightened Iron Railings on Dividers.
- ✓ Signals and Pedestrians Signals.
- ✓ Removal of encroachments.
- ✓ Repair of Potholed roads.
- ✓ Closure of Cuts

2. Night Time Safety Approach



Dangerous Night Driving

- Causes of traffic accidents are multifactors involving drivers, vehicles, and roads
- However, a large number of accidents occur during nighttime

Fatality Rates

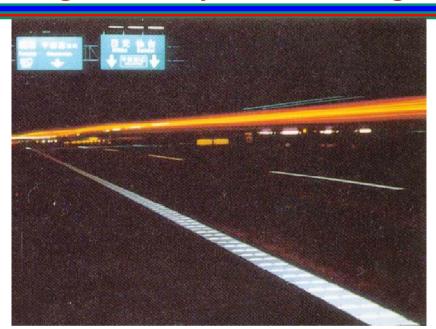


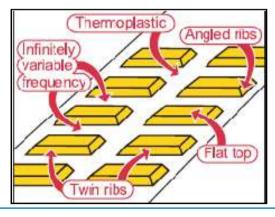
- Nighttime fatality is <u>fourfold</u> larger than daytime
- Rainy fatality is <u>twofold</u> larger than fair weather
- Snowy fatality is <u>threefold</u> larger than fair weather
- Overtaking lane fatality is <u>twofold</u> larger than driving lane
- Over-speeding witnessed for 60% of all accidents
- Non-seatbelt wearing witnessed for <u>50%</u> of all accidents
- Large vehicle fatality is <u>threefold</u>
 larger than passenger cars

(Source: E-NEXCO)

2. Night Time Safety Approach

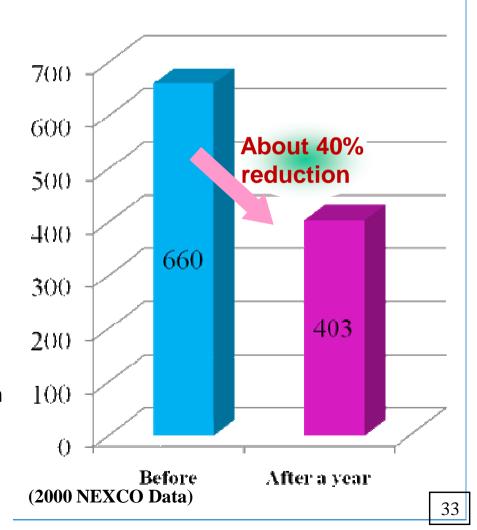
High Visibility Road Marking





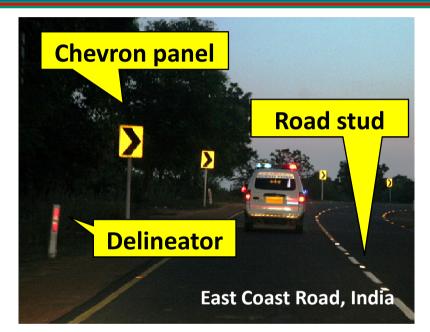
Sound & Vibration Marking

Reduction of number of traffic



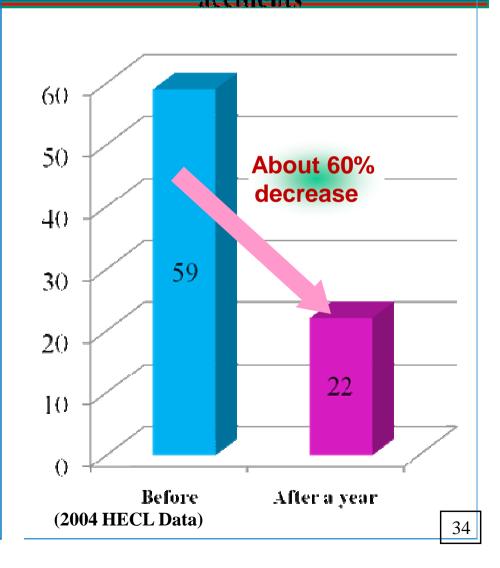
2. Night Time Safety Approach

Curve Indicators





Reduction of number of traffic



Nose protection

✓ On low height dividers

- Installed at nose of low height dividers.
- High visibility during day and night.
- Direct the motorists to traffic carriage way.
- Reduces loss of property and life.

Example: W Point, Tilak Marg





W - Point



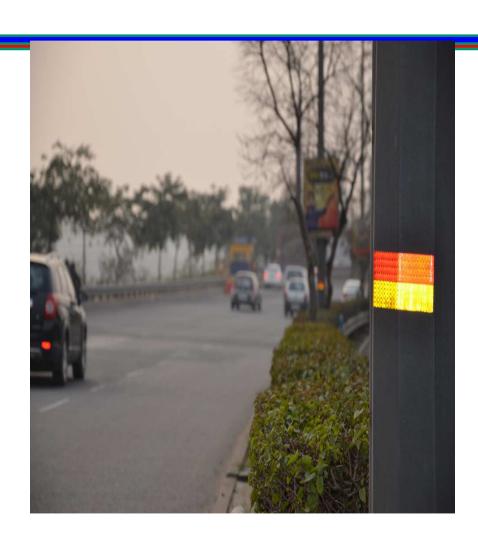


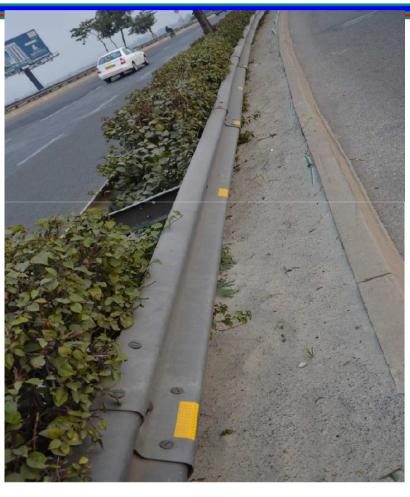




Yamuna Expressway







How should be the roads









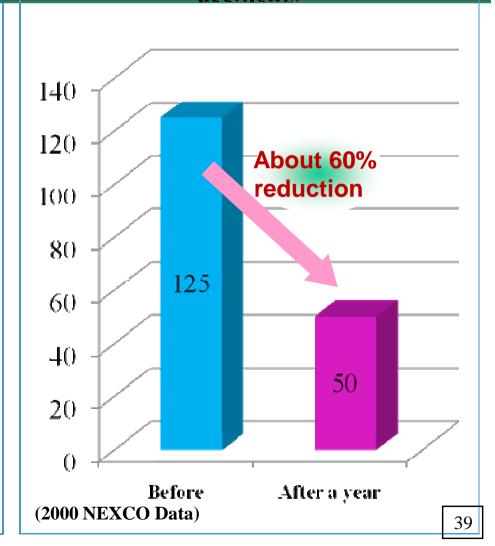
4. Accident-Prone Location Approach (2/10)

Rumble Strips on Sharp Curves





Reduction of number of traffic



4. Accident-Prone Location Approach (6/10)

Diverging Indicator cum Protector





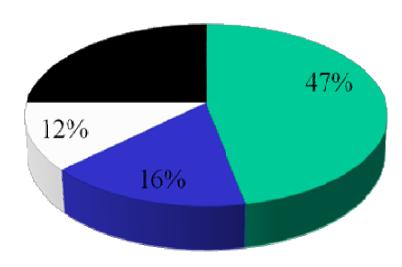






Casues of Traffic Accidents

- failing to notice
- misjudgement
- □ mishandling
- others (ovespeeding, drunk driving)



(Institute of Traffic Accident Analysis, Japan)

Speed Calming



✓ Mastic Strips

- At pedestrian crossings, it reduces vehicles speed forcibly and reduces the damage.
- Forcibly but gently retards vehicle speed.
- At night, when traffic volume is low, full width of road is available, this device retards over speeding and augments safety.
- These mastic strips are stable, durable, low cost and have longer life.

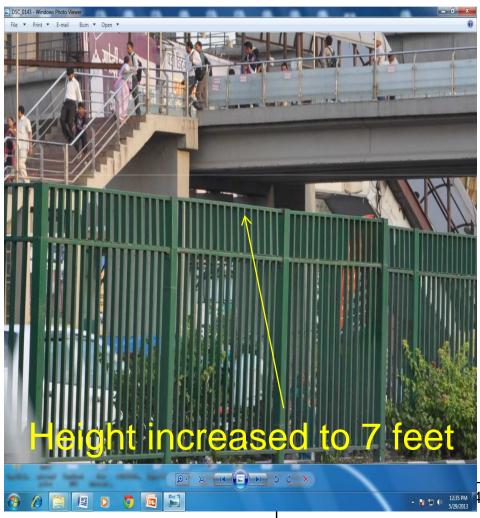
Example: Fourth Avenue, Lodhi Colony and Aurobindo Marg



Interventions - Road No. 56



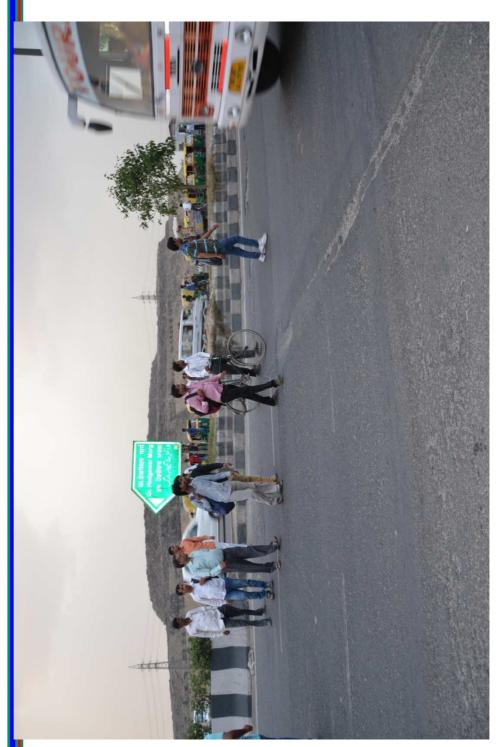




Cautionary Strips







PUNJABI BAGH FLY.OVER. NO NOSE PROTECTION DEVICE





NH-1 BUDH PUR. NO SINAGE FOR UNDER PASS





4. Accident-Prone Location Approach (8/10)

Proper Design of Safety Barrier





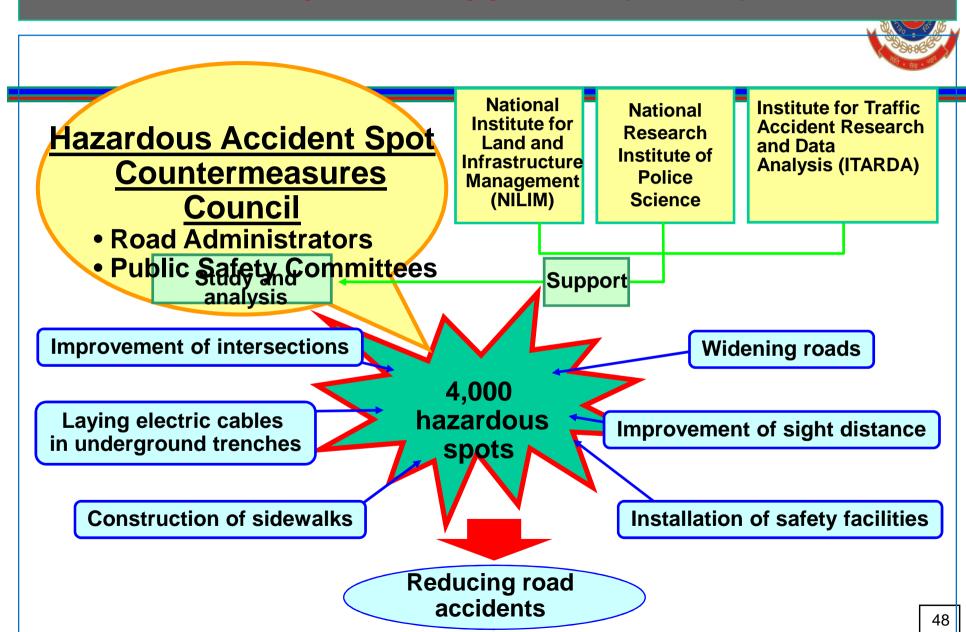
Covering the edge of bridge and tunnel



Covering a lighting pole



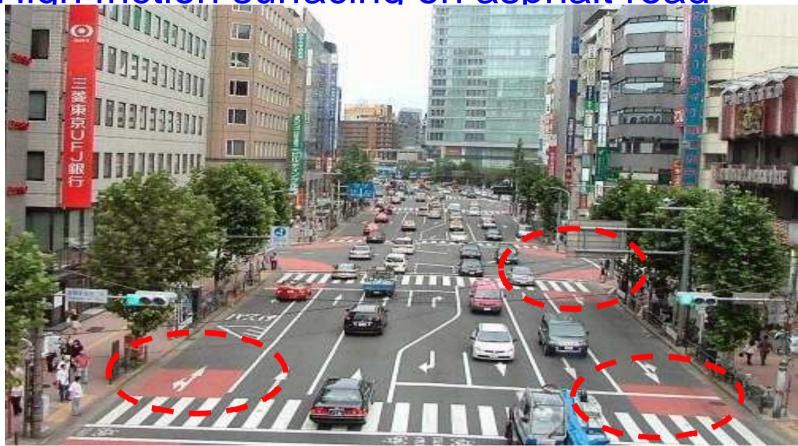
7. Japanese Approach (11/18)



Can we achieve this?



✓ High friction surfacing on asphalt road



High friction surface







Friction enhanced curves

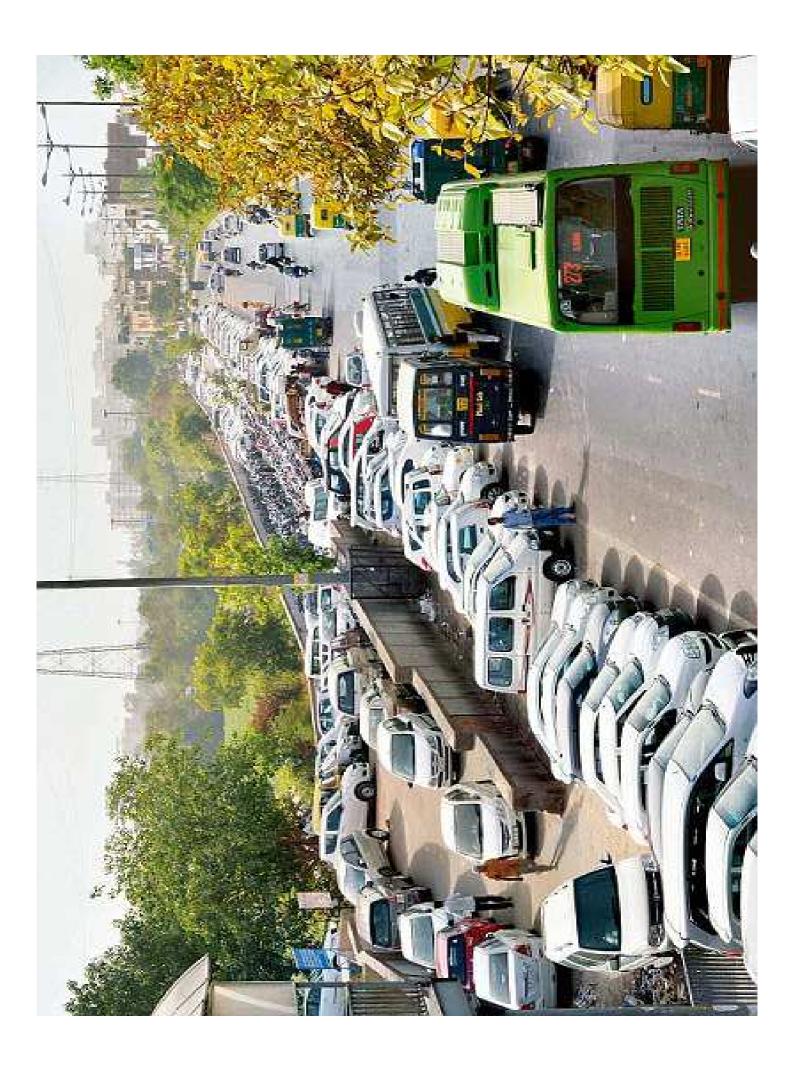




Condition of roads after rains

















NMVs Spreading Ahead of Stop Line







Obstructive Parking



Loading & unloading



No Entry



 Restriction on plying of commercial goods vehicles.

Timings

- ✓ 24 hours
- ✓ 7.30 AM to 9.30 PM
- ✓ 7.30 AM to 11 AM
- ✓ 5 PM to 9.30 PM.

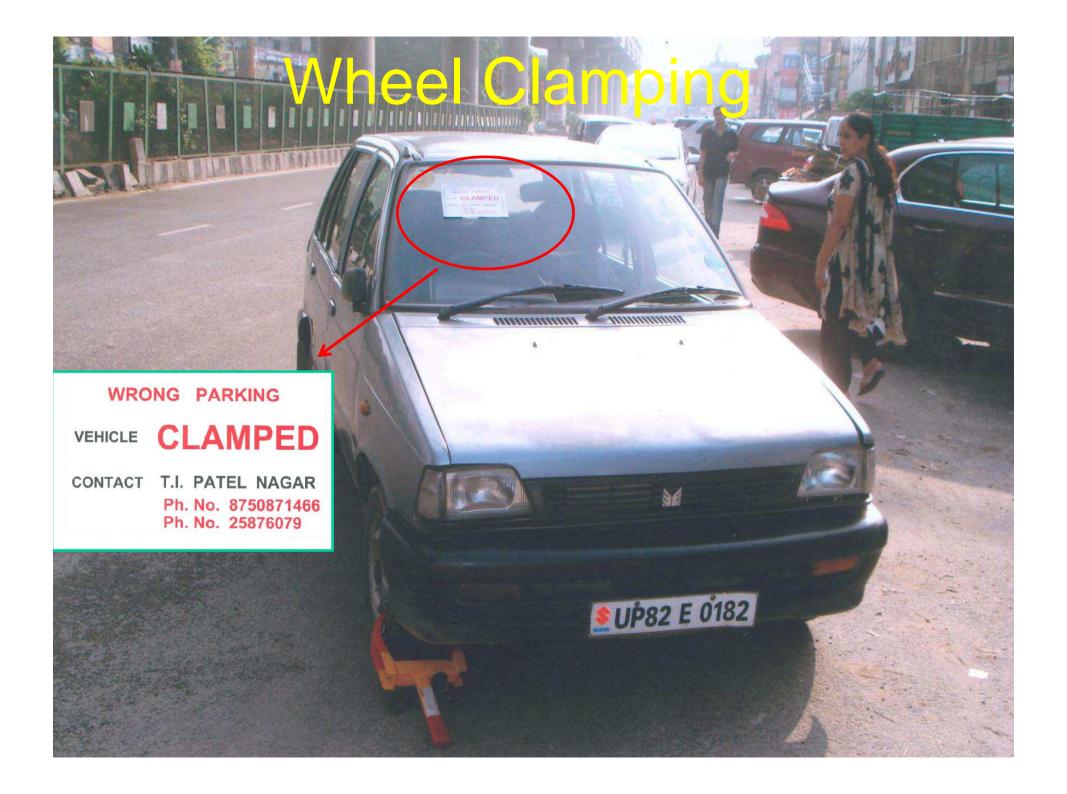
Restriction timings for HGVs/MGVs

- 24 hours
 - ✓ New Delhi area
 - ✓ Walled City area etc.
- 7.30 AM to 9.30 PM
 - ✓ Aurobindo Marg
 - ✓ Africa Avenue
 - ✓ Lala Lajpat Rai Marg etc.
- 7.30 AM to 11.00 AM & 5.00 PM to 9.30 PM
 - ✓ Ring Road
 - ✓ Outer Ring Road
 - ✓ NH-8 etc.

Signal Modernization



- √ 809 Signals & 390 Blinkers
- ✓ 88 Pedestrian Signals
- √ 42 Pelican Signals
- √ 06 Solar back-up power signals
- ✓ 28 Synchronized corridors
- √ 662 signals with CDTs whole Central Range covered
 - √ 65 recently installed
 - ✓ 134 underway



Introduction of 'E-Challan'







Benefits of E-Challan



✓ Increased Compliance:

- History of driver, vehicle and previous challan
- Stolen vehicle data base
- Transparency & Evidence

• Increased Accuracy:

- Error Free
- Easy Retrievals
- Performance Indicator

✓ Increased Efficiency:

- Checks efficiency of challaning officers
- Provide accurate date, time, place of challan
- Eliminates carbon copies
- Easy retrieval of repeat offence data
- Electronic data base

Repeated Violation Commercial vehicle

07.01.2013 to 15.02.2014

														VISI
OFFENCE	BUS	CAR	DVAN	GRAMIN SEWA	HTV	TGV	OTHERS	RTV	SCHOOL VAN/ CAB	TAXI	TRACTOR	TSR	TWOWHEE LER	TOTAL
**Cancellation of DL/badge/permit and RC	0	1	8	0	0	3	1	0	0	2	0	9	0	24
WITHOUT PERMIT	26	11	25	248	8	13	7	25	1	6	1	95	24	490
** Cancellation of D/L	30	20	70	266	16	62	8	28	4	10	3	78	20	615
* One instance * Cancellation of Permit/RC	26	28	218	286	20	136	21	23	3	22	2	479	41	1305
PERMIT VIOLATION * Two offences in a calendar year ** Cancellation of Permit/RC	102	57	66	581	15	37	31	67	10	58	5	625	62	1716
Not driving in proper lane Without speed governor Stopping without bus stop Wrong overtaking														
* 4 times in a calendar year ** Cancellation of Permit/RC	0	0	0	0	0	0	0	0	0	0	0	0	0	(
TOTAL	184	117	387	1381	59	251	68	143	18	98	11	1286	147	4150

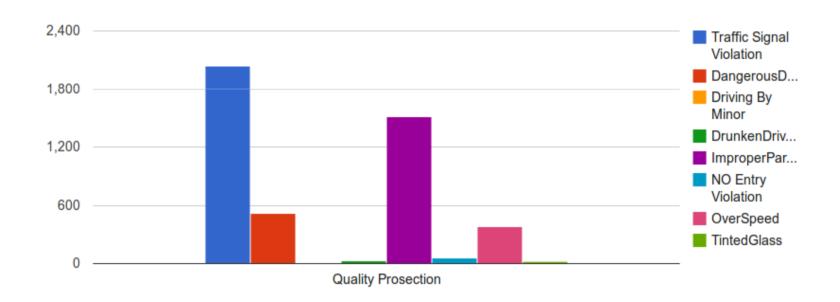


Sample Reports

Quality Prosecution



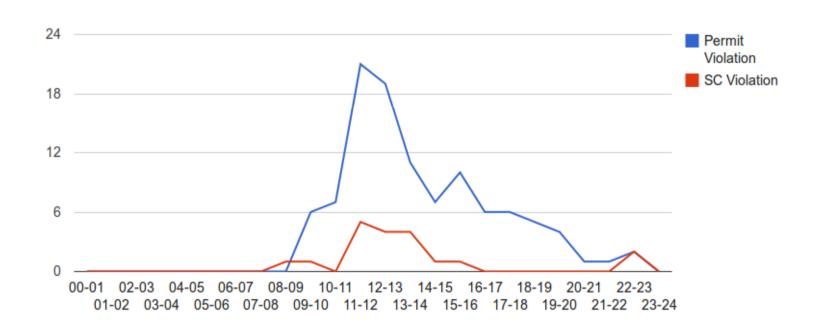
Quality Prosecution



Supreme Court and Permit Violations



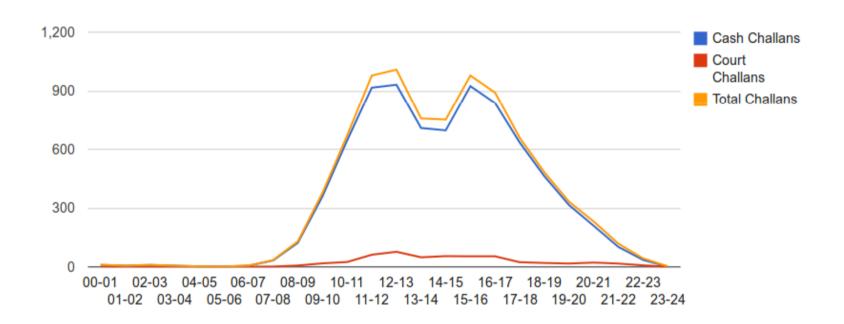
Supreme Court And Permit Violations



Total Challan Progress



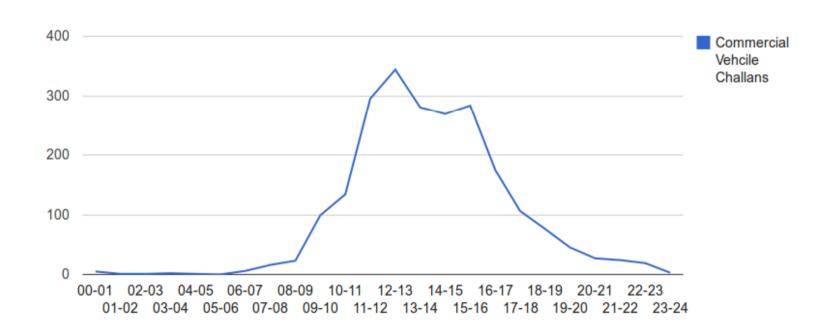
Total Challan Progress



Prosecution Of Commercial Vehicles



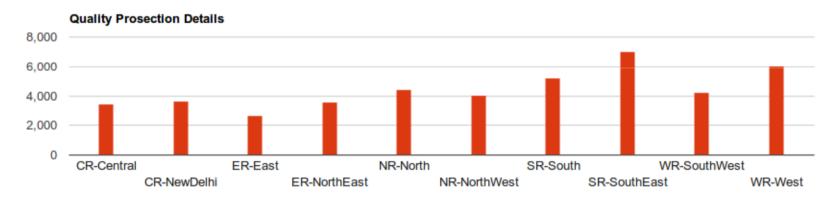
Prosecution Of Commercial Vehicles



Fortnightly Quality Prosecution



Quality Prosecution Details



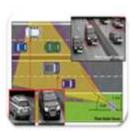
ITMS Solution Highlights



ITMS Primary Components



Red Light Violation Detection System



Speed Detection System



Variable Message Signs



Speed Control Signs and Lane Violation Detection



Adaptive Traffic Singnal Control



Public Address System

Expected Outcomes

Reduction in road accidents

Reduction in traffic congestion

Detection of red light violations, lane changes and over speeding etc.

Decrease in overall travel time

Decrease in Fuel Consumption and Emissions

Better Information
Dissemination to road users

Parking Management

Infringement Coverage with ITMS

Over Speed

Red Light Jumping

One Way Violation

Stop Line Crossing

Yellow Line Violation

Improper Parking

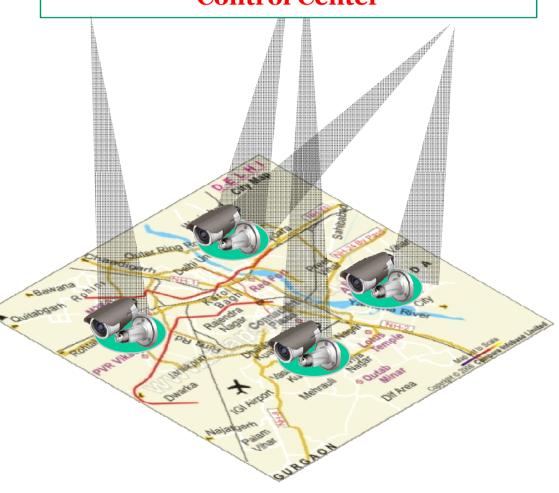
Not Driving Proper Lane

Stop without Bus Stop

Park/Wait in Bus Lane

Dangerous Driving

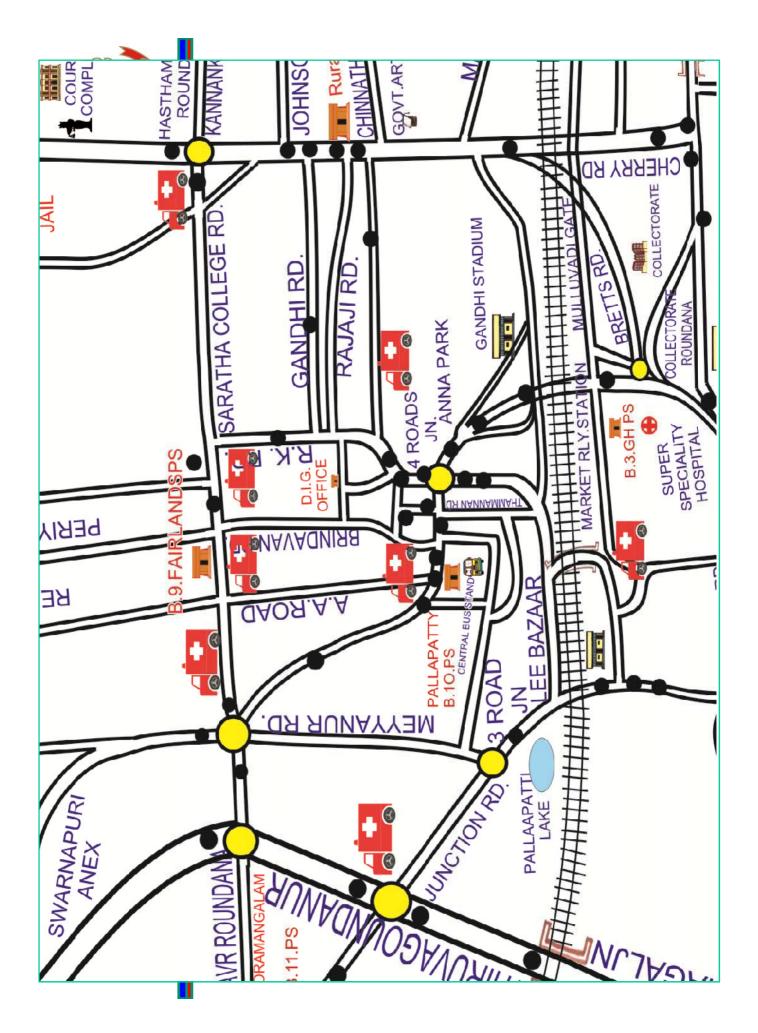
Delhi Traffic Police Command & Control Center



WAY FORWARD....



- ✓ Better Ambulance service
- ✓ Pedestrians Awareness
- ✓ Motorists Education
- Engineering Interventions
- ✓ Technology-
 - ITMS
 - ABS



PARTICIPATION OF PRIVATE AMBULANCE



St. MARY'S AMBULANCE

@ Sarada College Road



SHANMUGA HOSPITAL AMBULANCE

@ Kannakurichi Road



GB AMBULANCE

(a) Brindavan Road



CHELLAM HOSPITAL AMBULANCE

@ Hasthampatti Roundana



MANI AMBULANCE

@Four Road Junction

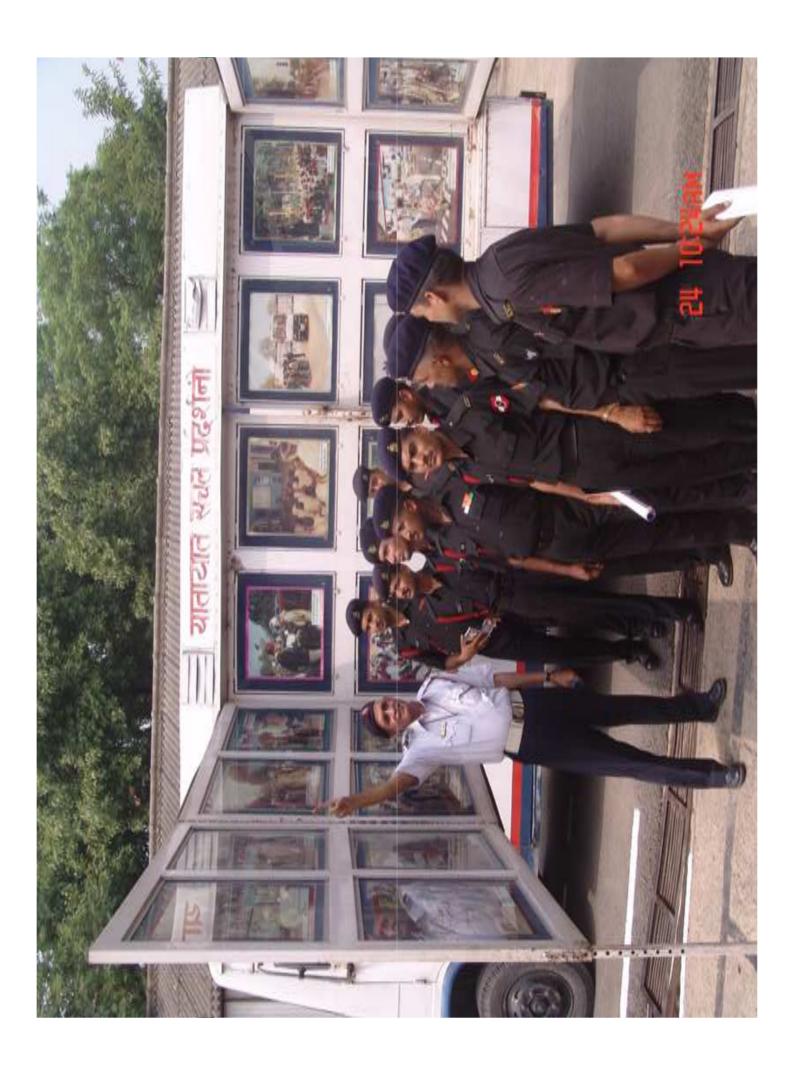


M.G.M AMBULANCE

@ Manalmedu



Education



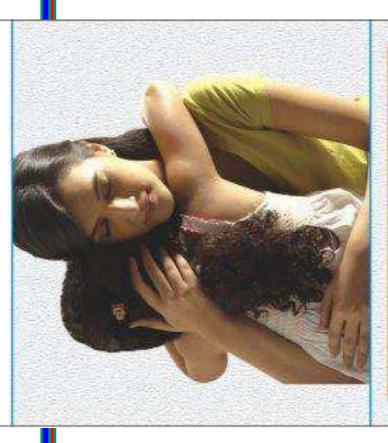


Fixing reflective tapes on 10 lac bicycles









शराब पीकर गाड़ी न चलाएँ।



दिल्ली पुलिस

FROM THE BAR TO BEHIND THE BARS





Traffic Police Helpline 011-25344444

Size: 1.5(w) x 2(h) feet (Ratio)



Public interface

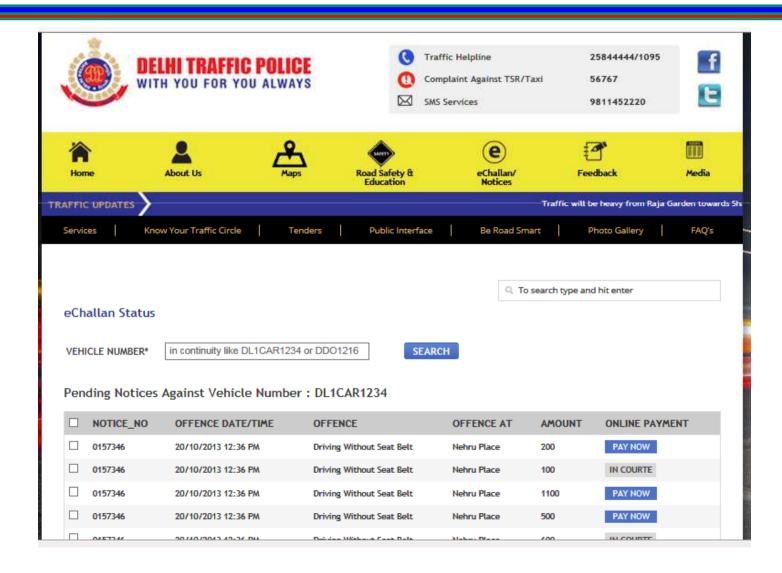
Front page



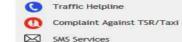


E-challan Notice







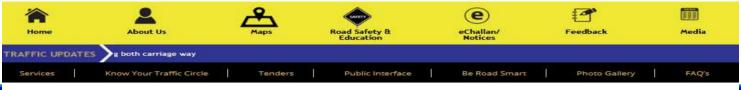




9811452220









South East District

Q. To search type and hit enter

9818099053 DCP: Shri Prem Nath

©: 011-26266748

☑: dcptsr-dtp@nic.in

ACP: Shri Rajender Prasad Arya

: 8750871414 ©: 011-26251883

☑::acpsedt14@gmail.com

Greater Kailash Hauz Khas Kalkaji Lajpat Nagar Circle Circle Circle

Sarita Vihar Mehrauli Circle Circle

Traffic Circle, Greater Kailash

Circle

TI: Inspector Bir Singh

☐: 8750871458

©: 011-26414224

How to reach the Traffic Police Circle

- Situated:-P.S.Nehru Place Near Paras Cinema
- Chirag delhi Flyover
- Moohchand Flyover
- Archna t-point sadik Naga

Sector Information

- ZONE-1- Archna T- point, sant nagar, Jamrudpur, G.k. 1, Kailesh hills, central school Andrews ganj
- ZONE-2- Chirag delhi, Sadik Nagar T- point, Shekh Sarai T- point Pushpa Bhawan
- · ZONE-3- khanpur crossing,khanpur depot,devli mor ,tigri t- point
- · ZONE-4- Hamdard T- point, Ratia marg, Batra hospital, Tigri Cut
- ZONE-5 -Tara appartment, Alaknanda Market, Mandakini t-point, Kamal t-point
- ZONE-6- Savitri cinema, Punjabi dhaba, A-B Block CR Park, K block Market no 1 , Market no 2 and Jalebi chowk CR Park

Important Places

- M block Market- G.k. 1
- M block MKt G.k.-1
- Market No 1 CR Park
- Market No 2 CR Park
- Alaknanda Market

Major Corridors

- · BRT Corridor (Khanpur to MoolchandFlyover)
- Lala Lazpat Marg
- · Outer Ring road (Chirag delhi flyover to Nehru place flyover)
- MB Road (Khanpur to Hamdard)
- RD Marg

Traffic Junctions

ARCHANA T-POINT

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Road Safety March by School children from India Gate Rajpath to Shastri Bhawan on the occasion of Delhi Police Week on 22-02-2014 (5 photos)







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Jatteen Agarwal Ya sab to thik han lakin koi suggestion dena ho to khan da ya bhi to btta do kai help line number pa call karna ka badd bhi koi sun wai nahi hoi or msg sa bhi kuch nahi hona wala han.

February 24 at 7:07am



Anshika Singh aap log road sefety kar rhe ho, aaj subhah bas se jaate samay aapke Head Qtr k saamne se teen char ladke byk se bina helmet double triple riding krte huye red light jump kr gye... red light se aage kabhi kabhi traffic k log khade hote hai,,, lagta hai logo ko kisi ka darr hi nhi hai.

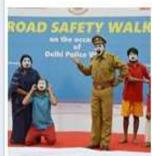
19 hours ago

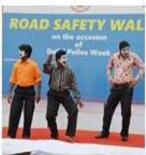


Delhi Traffic Police

February 24 (

Pantomime Show on the occasion of Delhi Police Week on 22-02-2014. (4 photos)







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Traffic Zam, Dinesh Kumar Tyagi, Piyush Angrish and 69 others like this.



Dev Walia STOP THIS DRAMEBAAZI....WHO WILL TAKE CARE OF THE PEDESTRIANS WHEN THE FOOTPATHS MEANT FOR THEM ARE ENCROACHED BY STREET VENDORS RUNNING THEIR EATING JOINTS????? WAKE UP FROM THE SLUMBER.

February 24 at 8:21am : \$\display 1



Jay Moorchilot Looks like Delhi needs a forum like CochinPedestriansForum for the good of pedestrians - https://www.facebook.com/CochinPedestriansForum



Cochin Pedestrians Forum

Cochin Pedestrians Forum's mission is to raise the issues faced by pedestrians i... See More Non-Profit Organization: 418 like this

4 hours ago

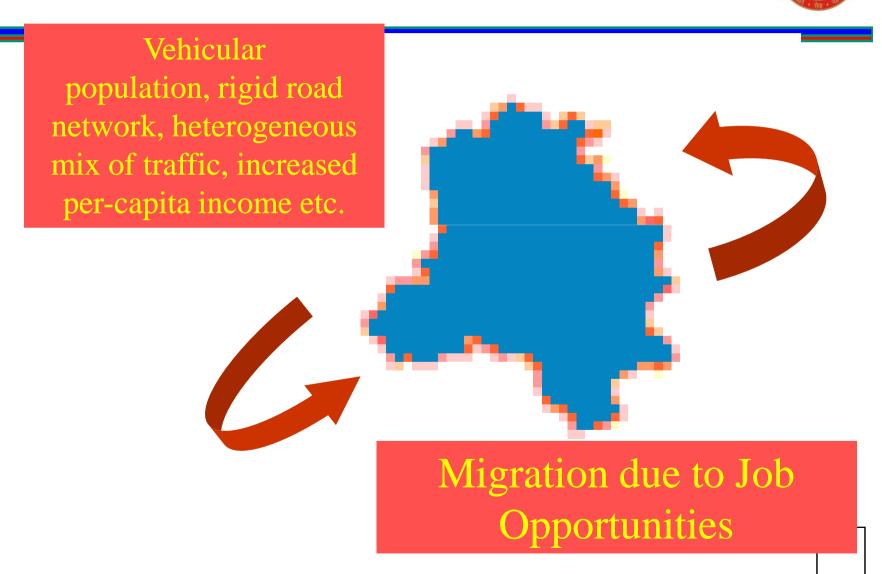
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THANKS

Causes of growing congestion in Delhi



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