REDUCING RD ACCIDENTS :

ACCIDENT HOTSPOTS, FACTORS RESP AND SOLN FOR REDUCING ACCIDENTS OR THEIR SEVERITY

CE (P) ARUNANK

PREVIEW

PART I : INTRODUCTION

PART II : FACTORS RESP FOR ACCIDENTS

- Plains
- Mtns

PART III : SOLNS FOR REDN OF ACCIDENTS/SEVERITY

- Structural measures
- Indl measures
- Org measures

PART IV : MODERN MEASURES FOR REDN OF ACCIDENTS / SEVERITY

PART V : RECOMMENDATIONS

PART I : INTRODUCTION

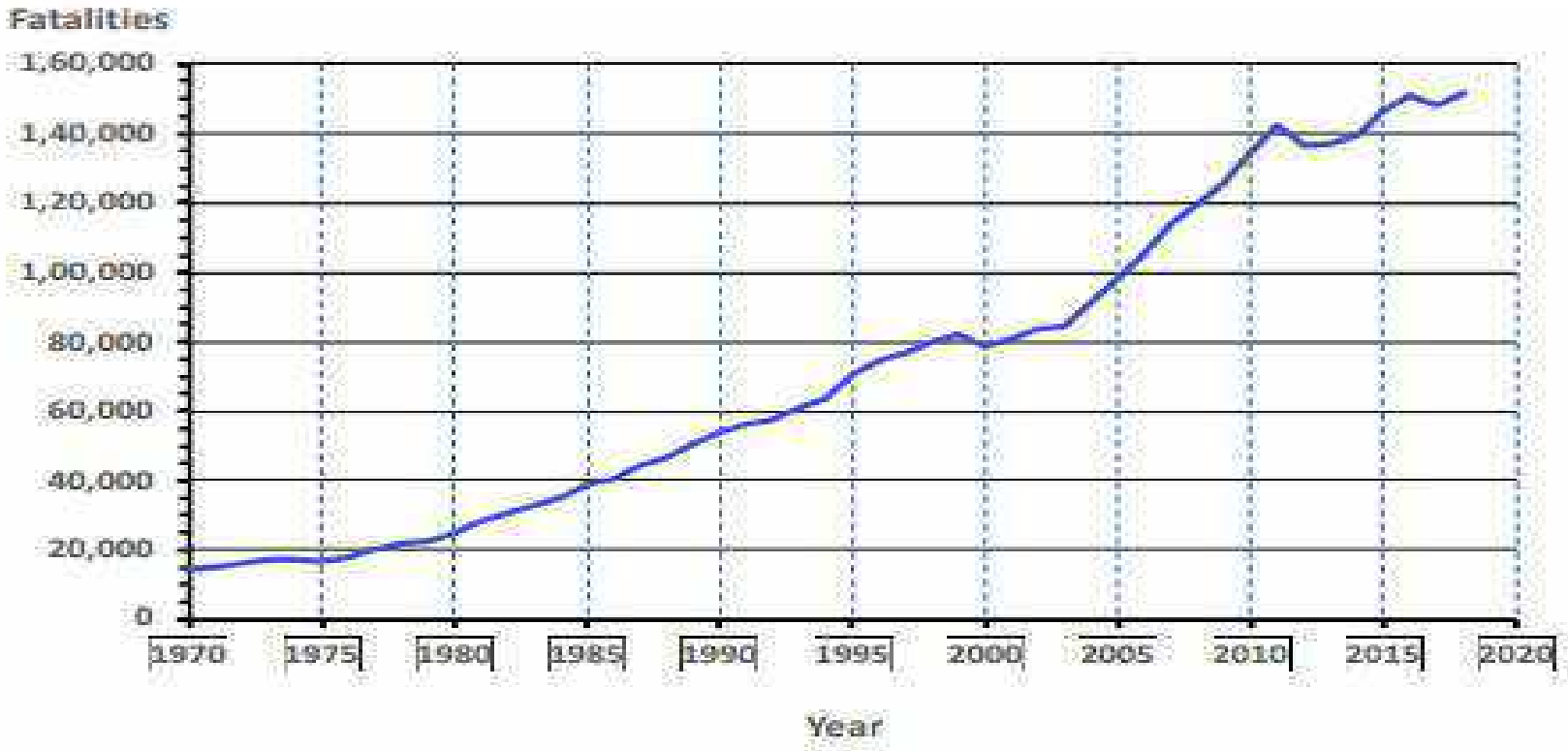
ROAD ACCIDENTS IN INDIA

Type of road accident	Parameter	2015	2016	2017	2018	
Fatal accident	Number	1,31,726	1,36,071	1,34,796		
	% age increase / decrease	4.7	3.3			
	share in total	26.3				
Grievous injury accidents	Number	1,19,668				1,26,759
	% age increase / decrease				3.6	1.2
	share in total			.0	26.8	28.2
Minor injury accidents	Number			1,74,400	1,69,920	1,57,215
	% age		-2.6	-7.1	-2.6	-7.5
		.4	39.0	37.5	36.4	35.0
		57,395	36,091	34,743	34,087	27,339
	crease	2.8	-37.1	-3.7	-1.9	-19.8
		11.4	7.5	7.5	7.3	6.1
	mber	**5,01,423**	**4,80,652**	**4,64,910**	**4,67,044**	**4,49,002**
	% age increase / decrease	**2.5**	**-4.1**	**-3.3**	**0.5**	**-3.9**

RD ACCIDENTS HAVE DECREASED OVER 6.4% IN THE LAST FIVE YEARS

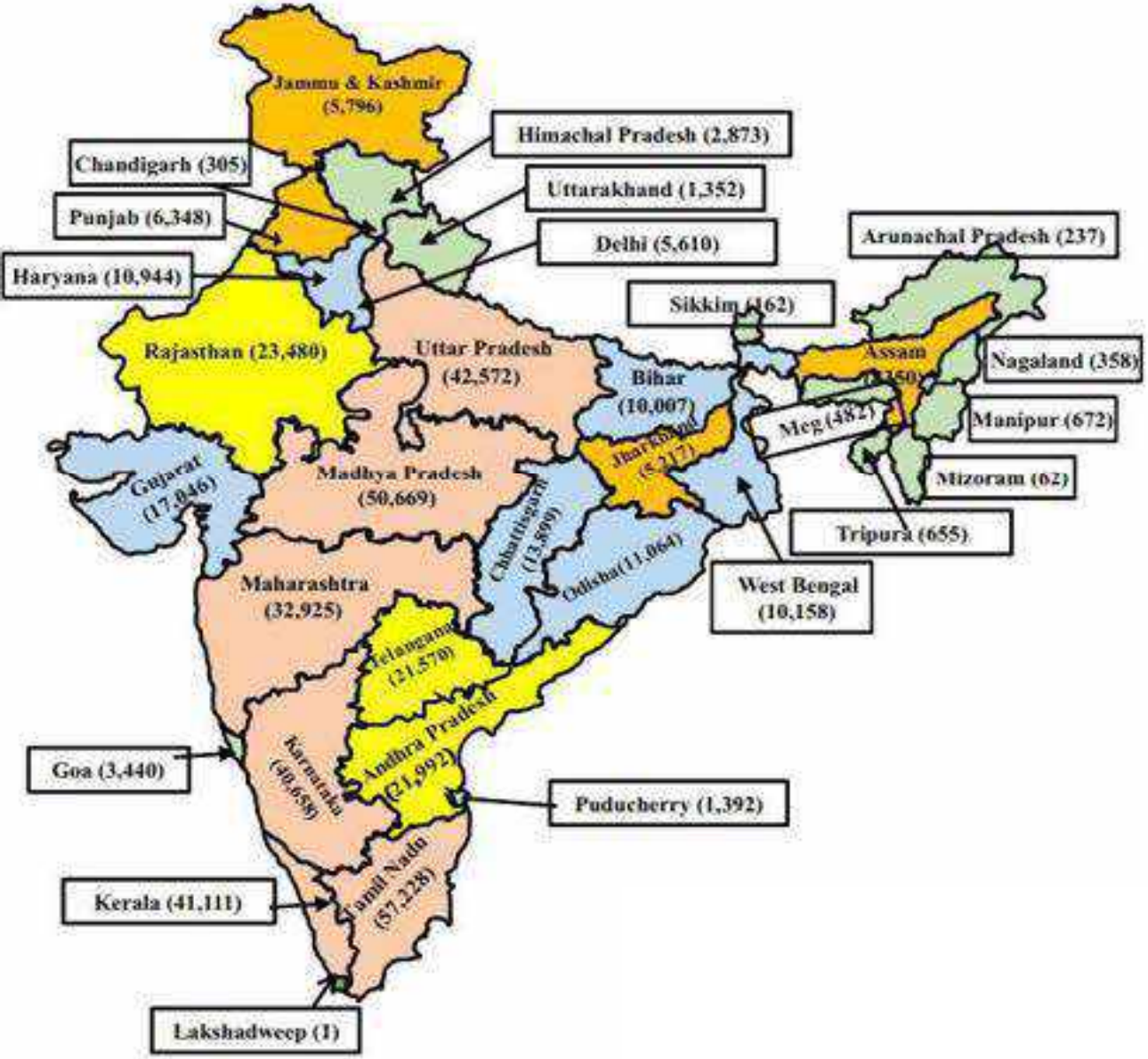
FATALITY GRAPH

- **Road traffic crashes in India in 2018**
  - **1,50,785 Killed**
  - **4,69,418 Injured**



Road traffic deaths in India 1970 through 2018 (Source: NCRB 2015 & Transport Research Wing, 2019).

ROAD ACCIDENTS IN 2019 - STATE-WISE



61% OF ACCIDENT RELATED DEATHS ARE OF STATES WITH MAXIMUM LENGTH OF NATIONAL AND STATE HIGHWAYS

Total no. of Accidents in 2019

- Below 5000
- 5000-10,000
- 10,001-20,000
- 20,001-30,000
- Above 30,000

INDIA'S STANDING IN ROAD ACCIDENTS

Country	Accidents			Persons Killed			Persons injured	
	Number	Rank	per Lakh people	Number	Rank	per Lakh people	Number	World Rank
United States	22,11,439	1	684	37,461	3	12	31,44,000	1
Japan	4,99,232	2	393	[illegible]	21	4	6,14,155	2
India	4,80,652	3	36	1,50,785	1	11	4,94,624	3
Germany	3,08,145	4	374	[illegible]	34	4	3,96,666	6
Chinese Taipei	3,05,556	5	1302	1,604	57	7	4,03,906	5
Iran, Islamic Rep.	2,93,305	6	365	15,998	7	20	3,63,531	7
Korea, R	[illegible]			[illegible]			[illegible]	8
China	[illegible]			[illegible]			[illegible]	11
Turkey	[illegible]			[illegible]			[illegible]	9
Italy	[illegible]			[illegible]			[illegible]	10
Russian	[illegible]			[illegible]			[illegible]	12
United K	[illegible]			[illegible]			[illegible]	13
Canada	1,17,673	13	324	1,898	52	5	1,60,315	14
Indonesia	1,06,129	14	41	26,185	4	10	1,44,108	15
Spain	1,02,362	15	220	1,810	54	4	1,40,390	16
Morocco	80,680	16	229	3,785	27	11	1,19,162	17
Brazil	60,228	17	29	6,398	14	3	86,672	18
France	57,522	18	86	3,477	28	5	72,645	19
Belgium	40,096	19	354	637	87	6	51,190	22
Austria	38,466	20	440	432	104	5	48,393	23

HIGHEST NO OF DEATHS !!!

CAUSE OF CONCERN…

SHORT DESCRIPTION

80,000 PEOPLE ARE KILLED IN ROAD CRASHES EVERY YEAR WHICH IS 13% OF THE TOTAL FATALITY ALL OVER THE WORLD. *(SOURCE MORTH)*

NATIONAL HIGHWAYS COMPRISE ONLY 15% OF THE TOTAL LENGTH OF ROADS IN INDIA BUT ACCOUNT FOR 33% OF THE FATALITIES *(SOURCE: TRW (TRANSPORT RESEARCH WING), 2019)*

FATALITY RATE PER KM OF THE ROAD IS THE HIGHEST ON NH WITH 0.67 DEATHS PER KM ANNUALLY AND THIS FACT SHOULD BE THE GUIDING FACTOR IN FUTURE DESIGN CONSIDERATIONS . *(SOURCE TRW)*

PART II : FACTORS RESP FOR ACCIDENTS

FACTORS RESP FOR ACCIDENTS AND SEVERITY IN PLAINS

ISTRACTED DRIVING (USING MOBILE WHILE DRIVING)

PEEDING / RECKLESS DRIVING

RUNK DRIVING

OT WEARING SEAT BELT

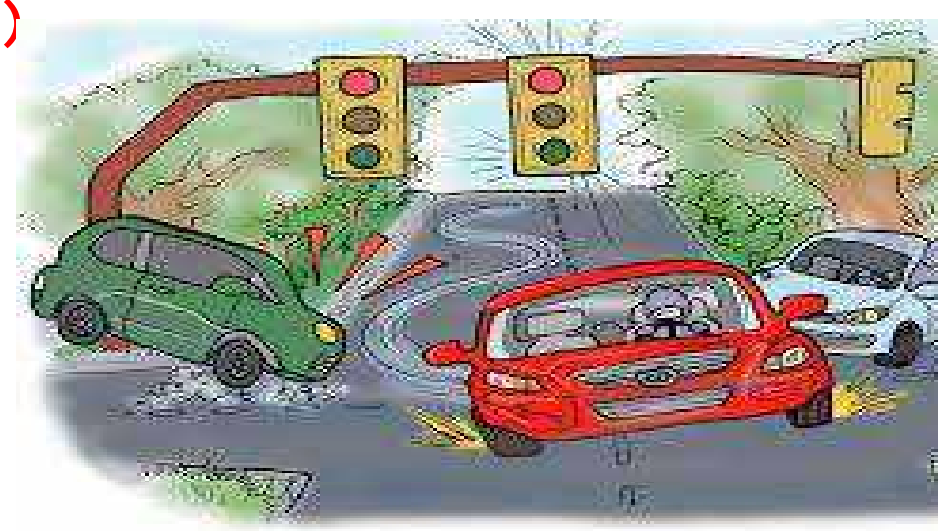
AIN/SNOW OR WET ROADS

OTHOLES AND BAD ROAD CONDITION

REAKING TRAFFIC RULES

AILGATING

NIMAL INFRINGEMENT

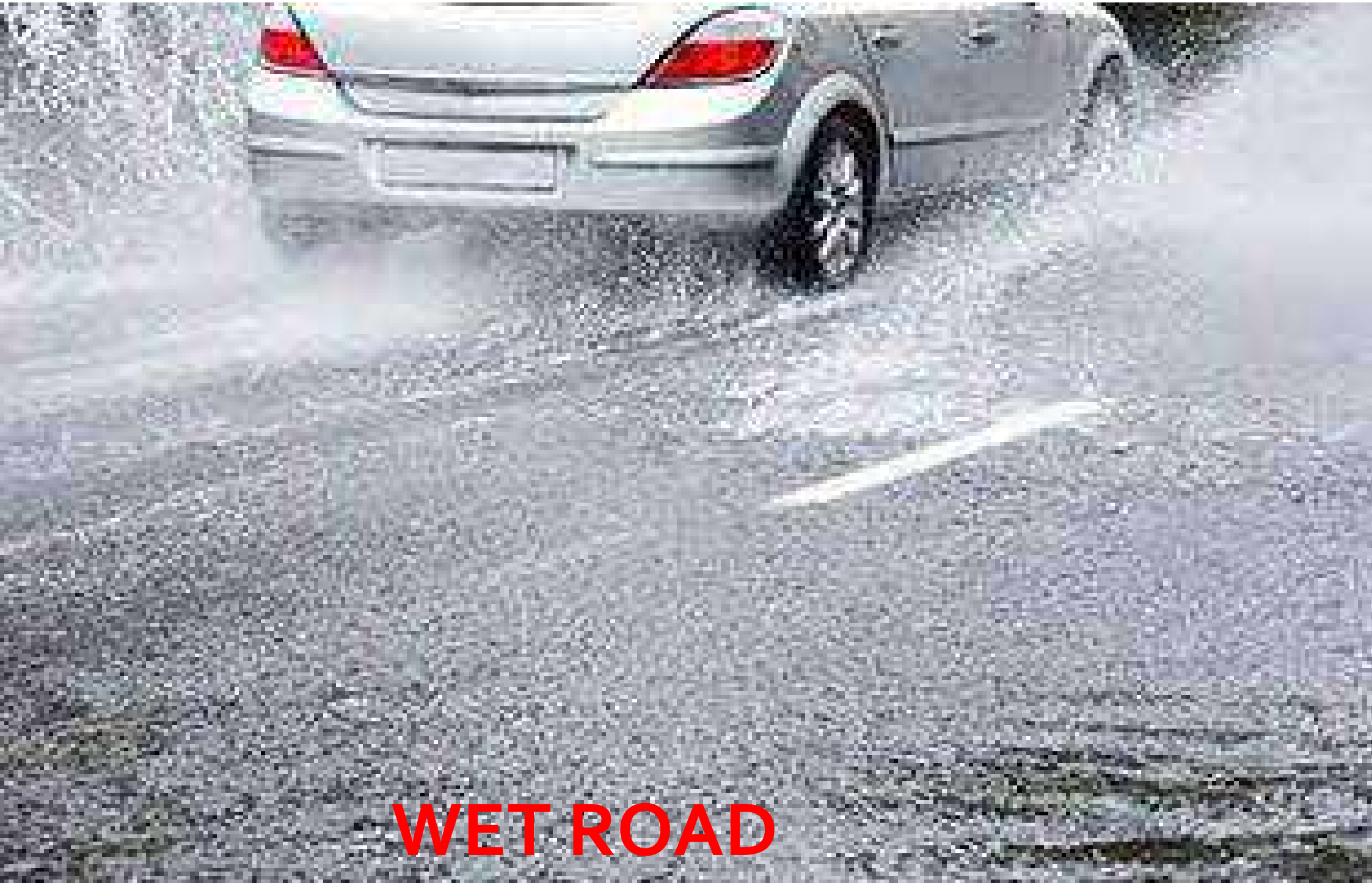


DISTRACTED DRIVING


Reckless Driving


DRUNK DRIVING

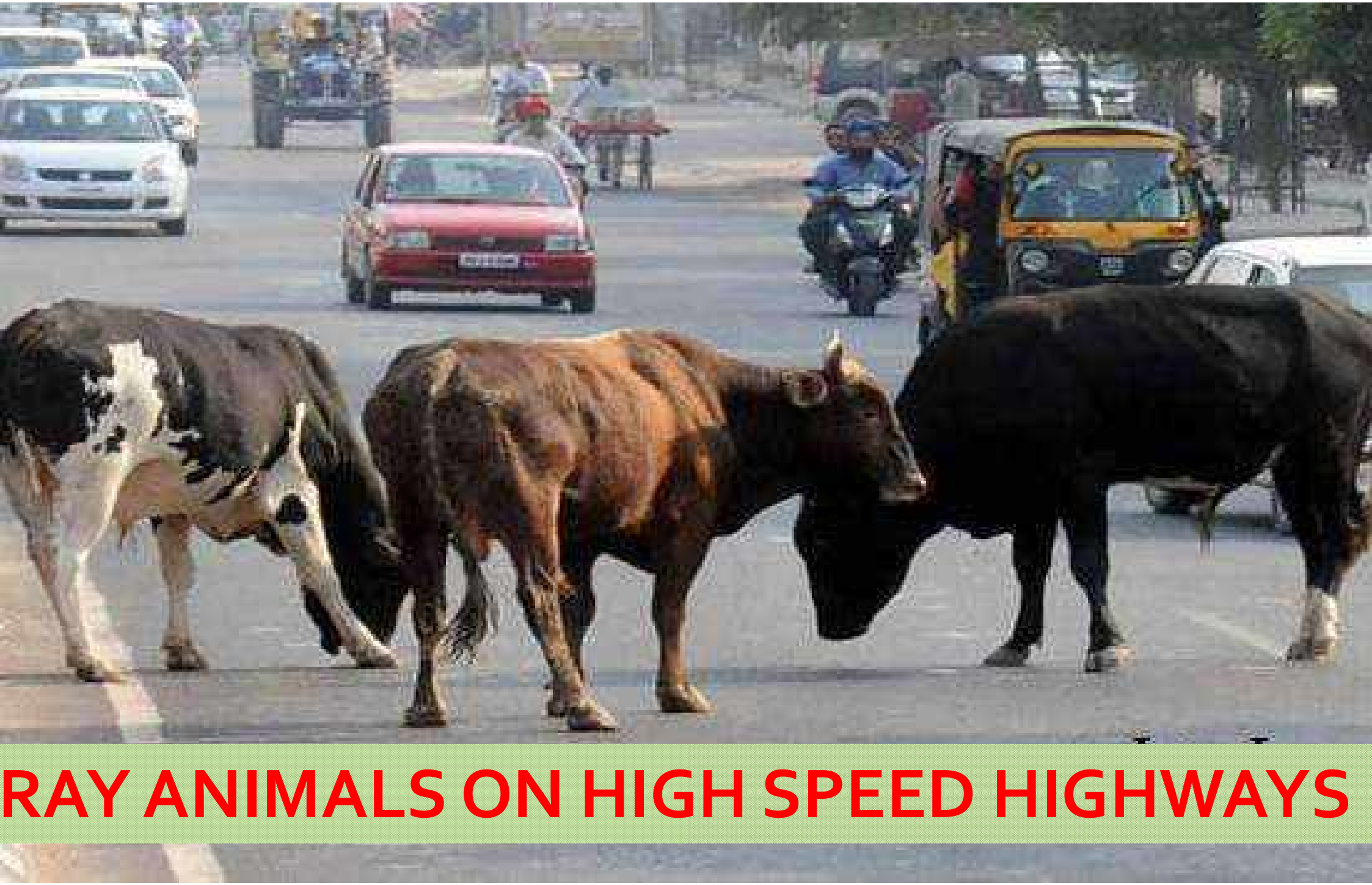

NOT WEARING SEAT BELT


WET ROAD


POT HOLES


BREAKING TRAFFIC RULES


TAILGATING



RAY ANIMALS ON HIGH SPEED HIGHWAYS

FACTORS RESP FOR ACCIDENTS IN MTNS

MPROPER ROAD GEOMETRY

ESS NUMBER OF PASSING PLACES

LIND TURNS

NAPPROPRIATE GRADIENTS

ET AND SLIPPERY ROADS

OOR LIGHTING

ACK OF ROAD FURNITURE

EGLIGENT PARKING

ATURAL OBSTACLES

ANDSLIDES/NATURAL DISASTERS

IMPROPER ROAD GEOMETRICS


LACK OF PASSING PLACES


BLIND CURVES

INAPPROPRIATE GRADIENTS


SKIDDY SURFACE

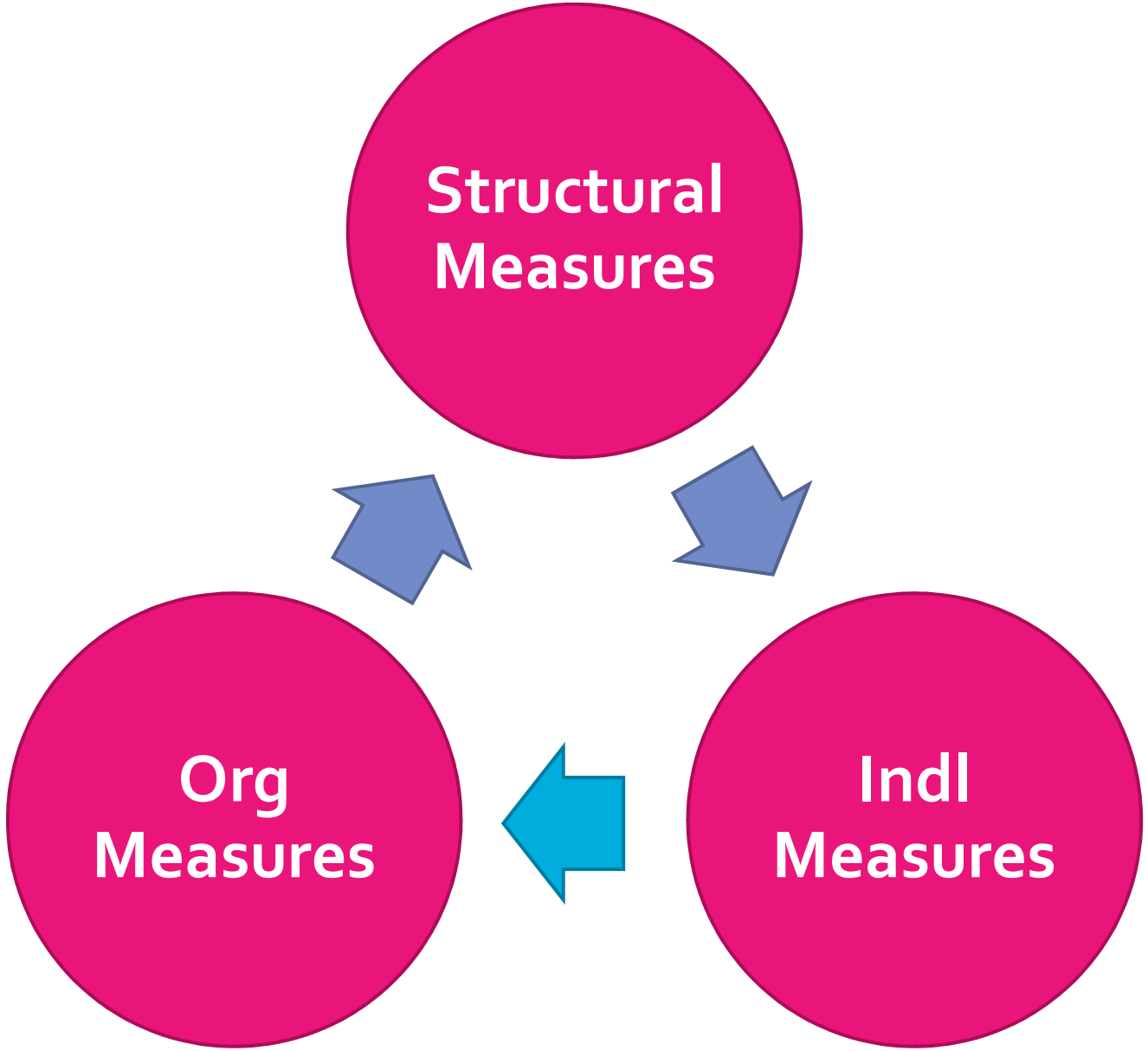

POOR LIGHTING

ROAD FURNITURE – THE SAVIOUR

TURAL OBSTACLES-TREES AND OVERHANG

PART III : SOLNS FOR REDN OF ACCIDENTS/SEVERITY

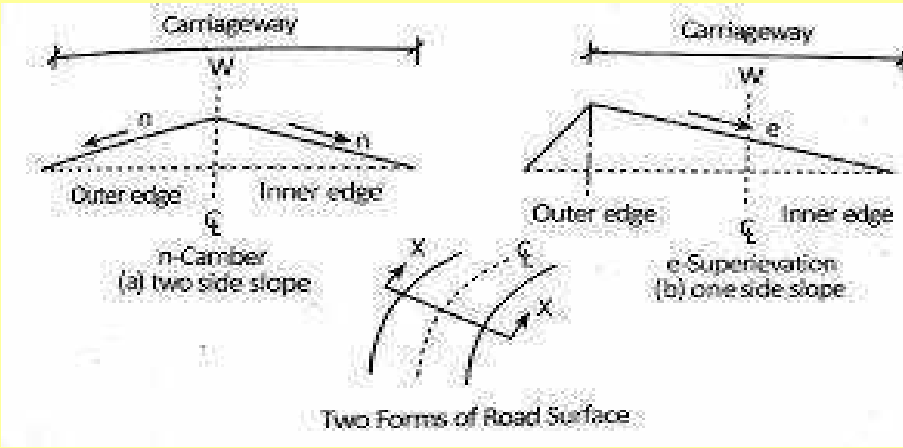
SOLNS FOR REDN OF ACCIDENTS/SEVERITY



STRUCTURAL MEASURES

d Design

- Good structural integrity
- Adequate no of passing places in mountains
- Rd gradient to be ensured
- Provision of proper cross drainages and drains
- Super elevation and camber to be ensured.
- Proper rd markings



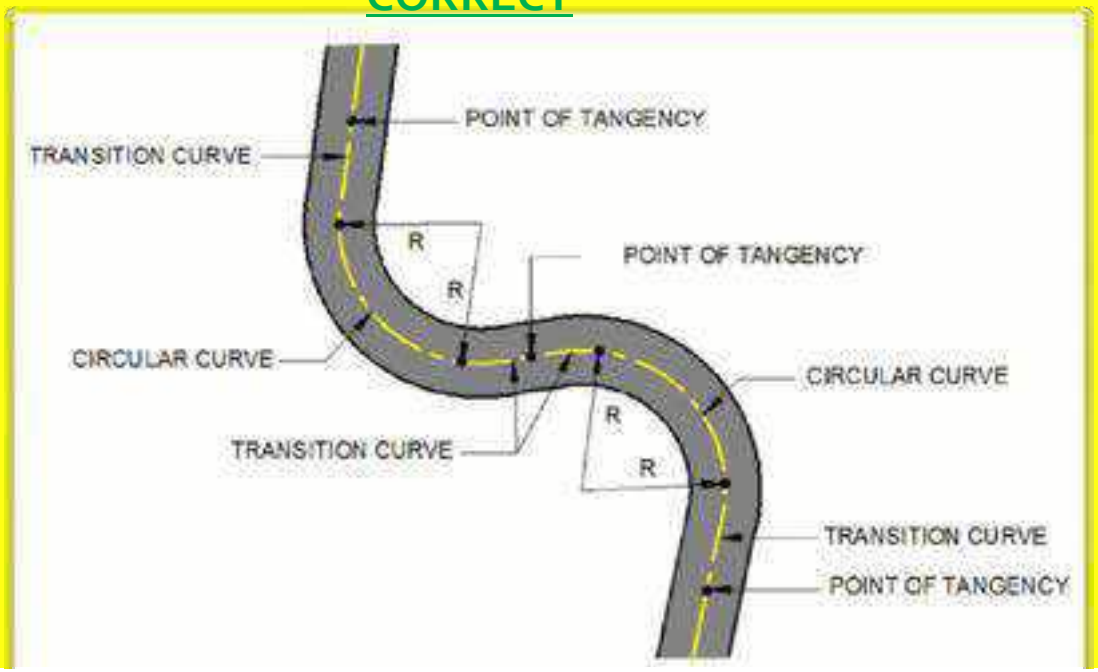
d Side Furniture

- Retroreflective bds
- Delineators
- Catchy and thought provoking rd signs and jingles
- Crash barriers
- Stud lights

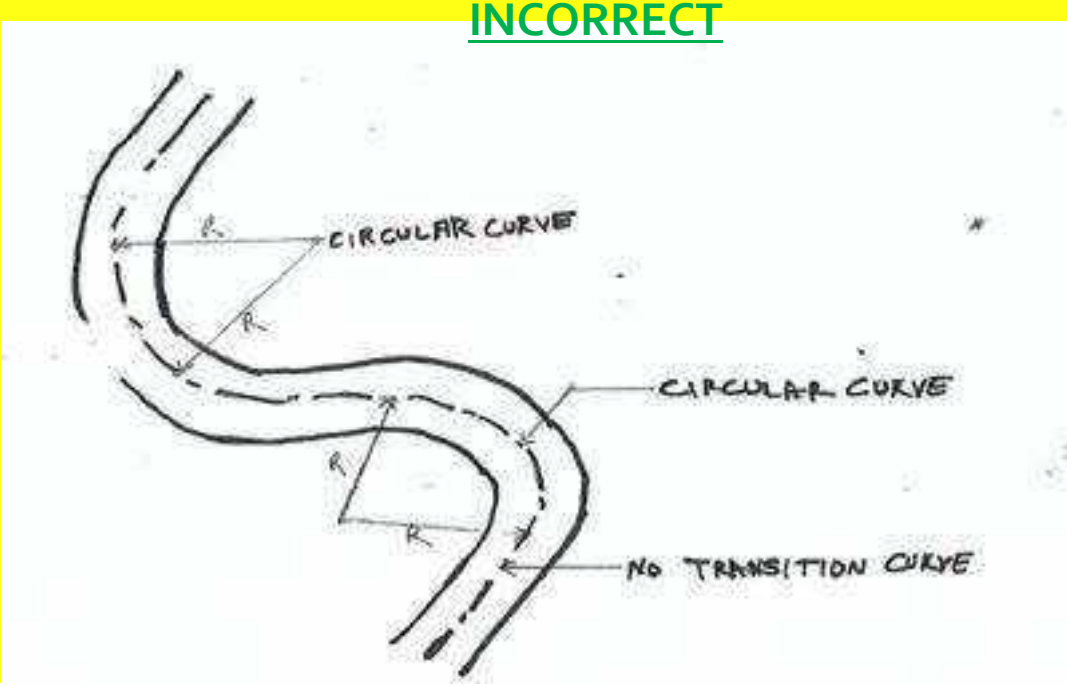
REVERSE CURVES ARE NEEDED IN DIFFICULT TERRAIN.

IT SHOULD BE ENSURED THAT THERE IS SUFFICIENT LENGTH BETWEEN THE TWO CURVES FOR INTRODUCTION OF REQUISITE TRANSITION CURVES.

CORRECT



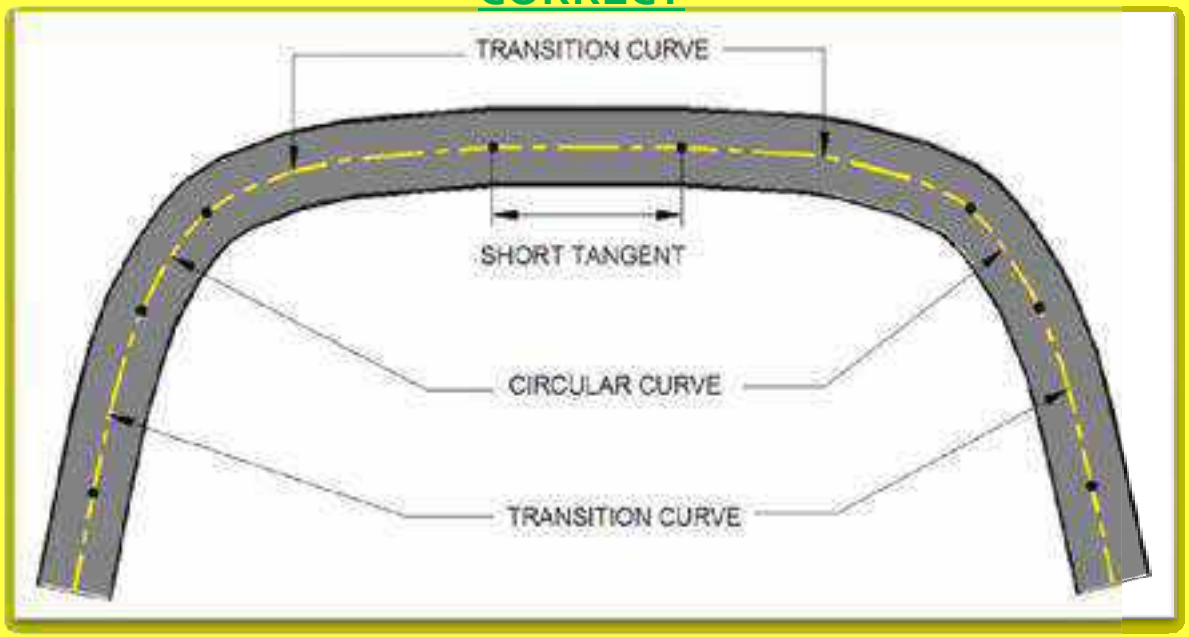
INCORRECT



ken-Back curves :

- CURVES IN SAME DIRECTION **SEPARATED BY SHORT TANGENTS,** KNOWN AS BROKEN – BACK CURVES.
- **SHOULD BE AVOIDED,** AS FAR AS POSSIBLE, IN THE INTEREST OF AESTHETICS AND **SAFETY** AND *REPLACED BY A SINGLE CURVE*. .

CORRECT



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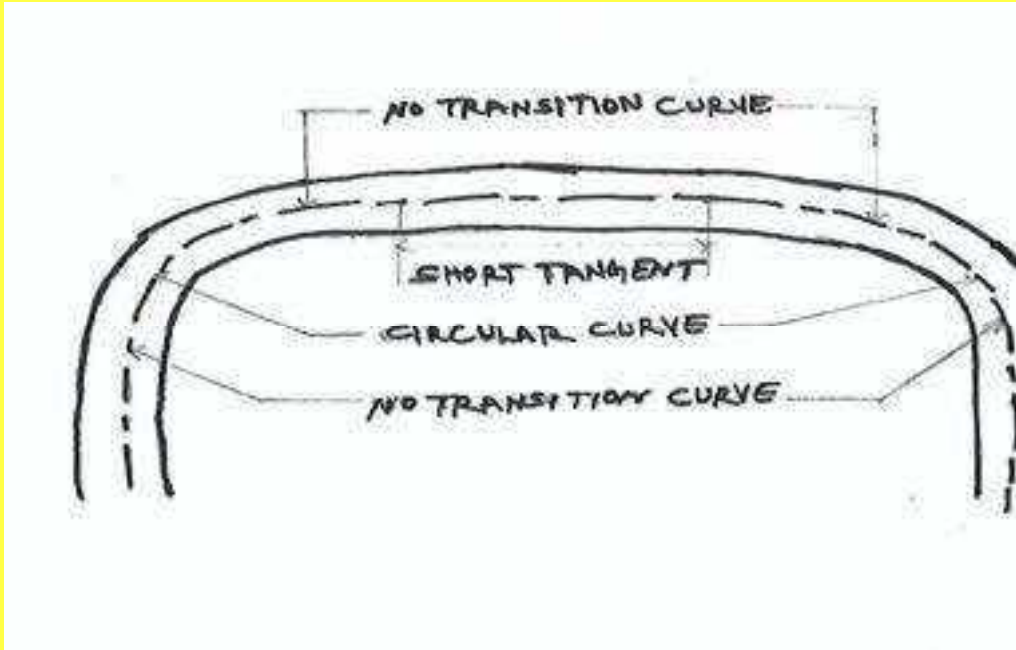
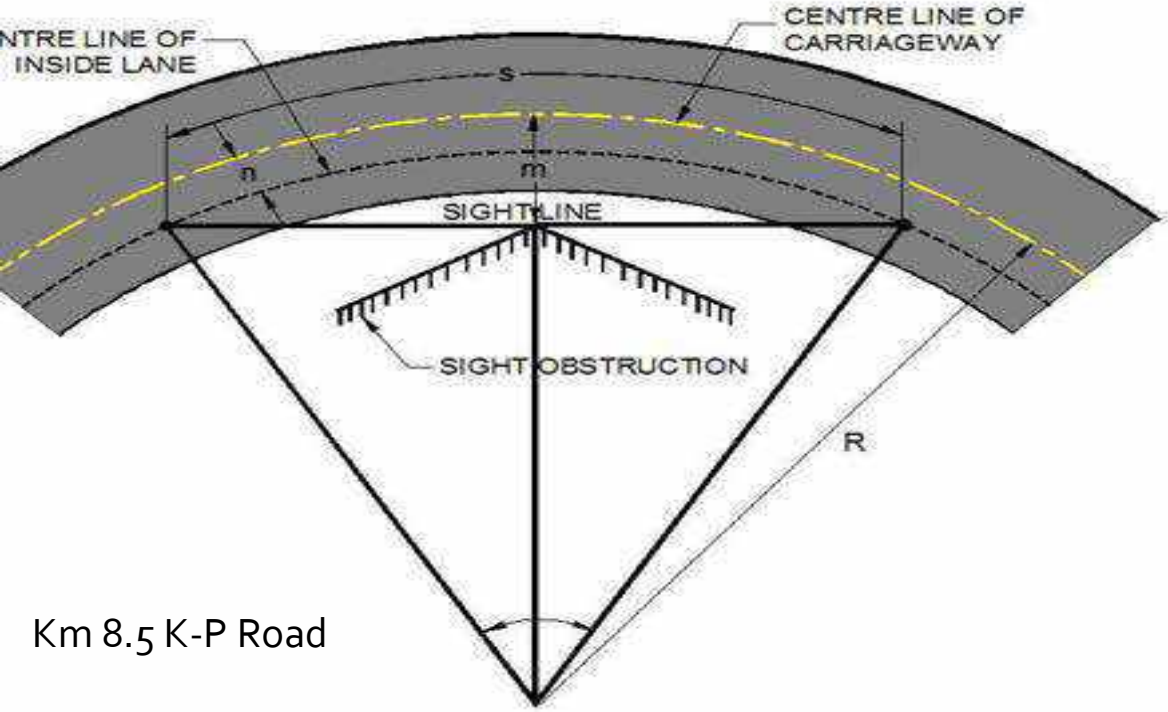


T BACK DISTANCE :

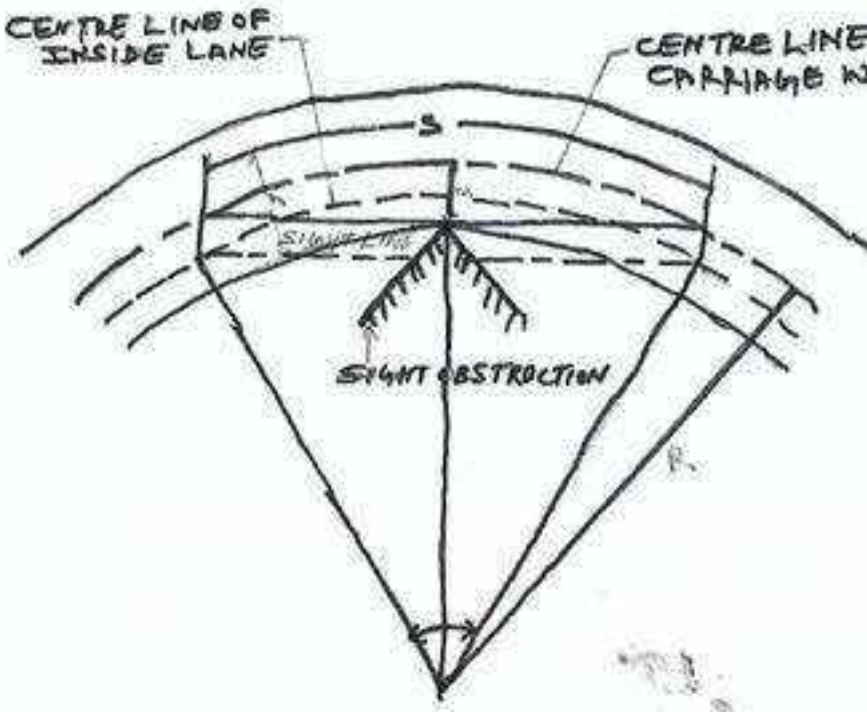
- **REQUISITE SIGHT DISTANCE** SHOULD BE AVAILABLE TO SIGHT THE INSIDE OF HORIZONTAL CURVES.
- **LACK OF VISIBILITY IN THE LATERAL DIRECTION** MAY ARISE DUE TO OBSTRUCTION LIKE WALLS CUT, SLOPES, WOODED AREAS, HIGH CROPS etc.

CORRECT



Km 8.5 K-P Road

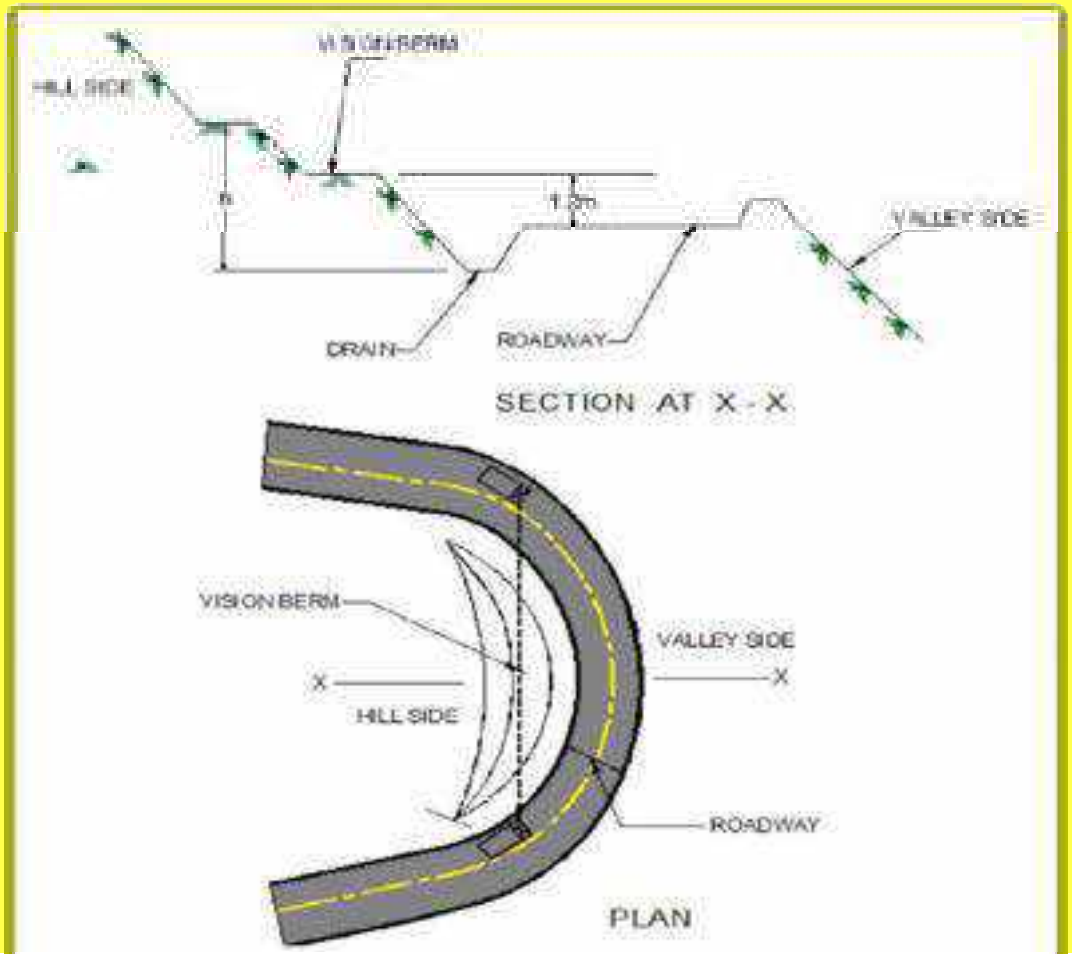
INCORRECT



n Berm :

- WHERE THERE IS A CUT SLOPE ON THE INSIDE OF THE HORIZONTA CURVE, THE AVERAGE HEIGHT OF SIGHT LINE CAN BE USED AS AN APPROXIMATION FOR **DECIDING THE EXTENT OF CLEARANCE**.

CORRECT



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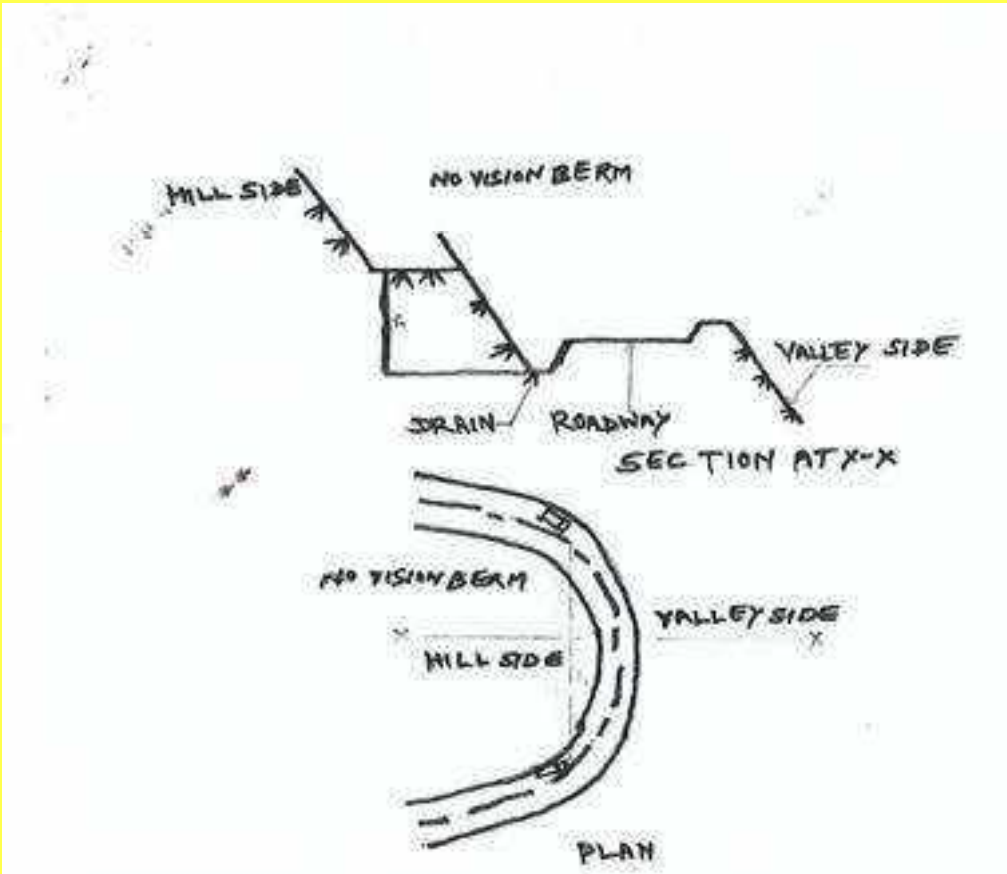
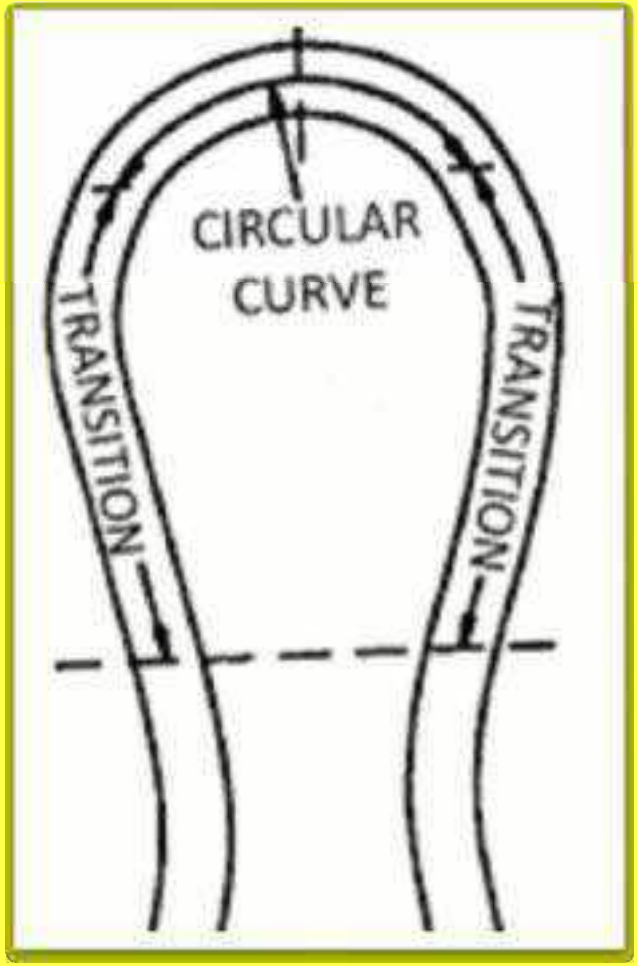


air-Pin Bends :

AT UNAVOIDABLE CIRCUMSTANCES HAIR-PIN BENDS **MAY BE DESIGNED AS CIRCULAR CURVE WITH TRANSITIONS** OR AS **COMPOUND CIRCULAR CURVES**.

escription		Criteria
n Design Speed		20 Km/h
n Roadway width at apex	NH/SH	11.5m (Double lane) 9.0m (Single lane)
	MDR/ODR ,Cl – 9 road	7.5m
	Village Roads	6.5m
n radius for the inner curve		14 m
n Length of transition Curve		15 m
radient	Maximum	1 in 40 (2.5%)
	Minimum	1 in 200 (0.5%)
ax Super elevation		1 in 10 (10%)
nimum Intervening distance between the successive hair n bends		60m



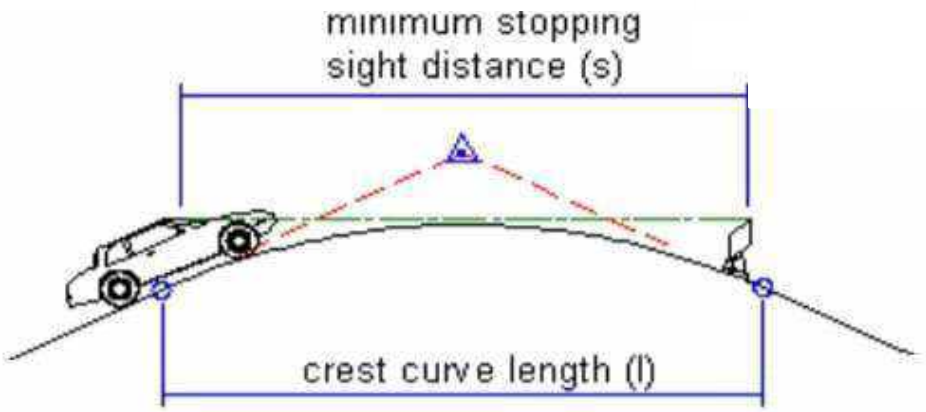
CL 9 RDS-STOPPING SIGHT DISTANCE

VERTICAL CURVES

OOTH VERTICAL CURVE SHOULD BE PROVIDED

EASE OFF THE CHANGES IN GRADIENTS FOR THE FAST MOVING VEHICLES.

OPER LENGTH TO HAVE SUFFICIENT STOPPING DISTANCE FOR VEHICLES.



ORG MEASURES

ORG MEASURES

dentification of Accident Black Spots

Black spot defined as stretch of NH

- Approx 500 m in Length
- Five rd accidents/10 casualties in three years

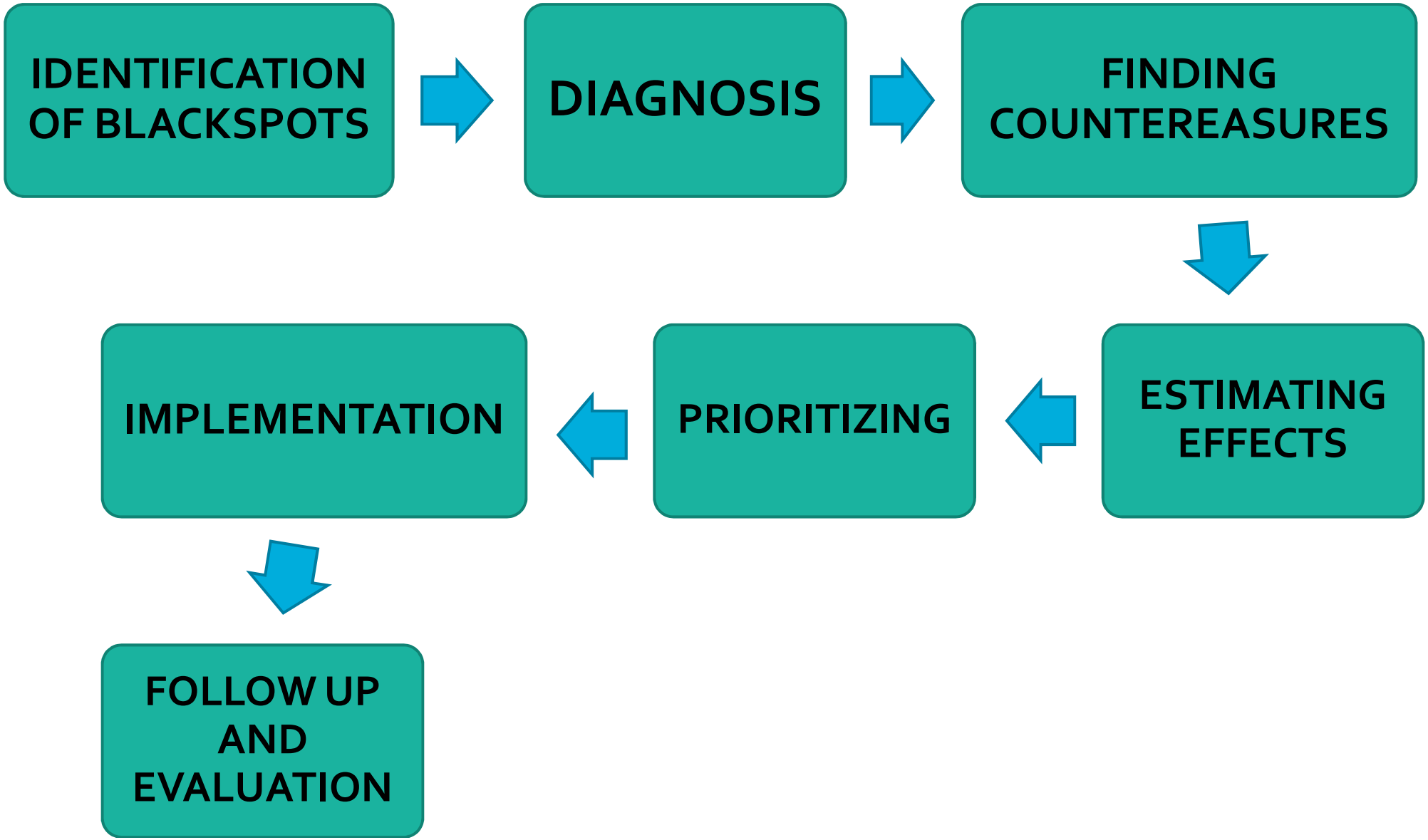
5583 Black spots identified in India till 2018

Classified based on rectification required

- Short term measures like rumble strips, lighting or sign bds
- Long term measures like road design/elevation, road widening, building of road overbridge, byepass, flyover, cattle underpass

Portal being developed for getting status/progress of rectification on real time basi

BLACKSPOTS ANALYSIS- A SCIENCE IN ITSELF



BLACKSPOTS ANALYSIS- A SCIENCE IN ITSELF

- **IDENTIFICATION** OF BLACKSPOT - PROCEDURE TO LOCATE THOSE SPOTS IN THE ROAD NETWORK THAT ARE PARTICULARLY DANGEROUS.
- **DIAGNOSIS** PROCESS TO STUDY WHAT ARE THE PROBLEMS, THE ACCIDENT CONTRIBUTING FACTORS AND THE DEFICIENCIES FOR EACH OF THE IDENTIFIED BLACK SPOTS.
- **FINDING COUNTERMEASURES** METHODICAL ANALYSIS TO DESIGN SUITABLE COUNTERMEASURES FOR EACH BLACKSPOT , BASED ON ACTUAL PROBLEM AND DEFICIENCIES.
- **ESTIMATING EFFECTS** IS THE PROCESS TO ESTIMATE THE SAFETY EFFECTS AND COST OF SUITABLE COUNTERMEASURE

BLACKSPOTS ANALYSIS- A SCIENCE IN ITSELF

- **PRIORITIZING** IMPLIES FINDING THE BEST ACTION PLAN, ACCORDING TO SOME DEFINED CRITIERIA AND BASED ON ESTIMATED EFFECTS AND COST AS WELL AS BUDGET RESTRICTION.
- **IMPLEMENTATION** IS THE ACTUAL REALISATION OF THE PRIORITIZED MEASURE INCLUDED IN THE ACTION PLAN.
- .**FOLLOW UP AND EVALUATION** THE LAST AND VERY IMPORTANT STEP, AIM IS TO ASSESS THE ACTUAL RESULTS.

POSSIBLE CONTRIBUTING FACTORS FOR ACCIDENTS AT BLACK SPOT AREAS

OAD WIDTH

DIVIDED/UNDIVIDED
GRADIENT
SHOULDER
VERGE
MEDIAN AND OPENINGS
FOOTPATH
KERBS, RAMPS
DRAINAGE OR COMBINATION OF ABOVE FACTORS

ABSENCE OF SIGNS AND MARKINGS

BAD LIGHTING LIKE

- INAPPROPRIATE TYPE OF LIGHT AT IMPROPER HEIGHT WITH LESS
- INTENSITY OR ELSE WITH
- OBSTRUCTION

PRESENCE OF ROADSIDE FRICTION LIKE

- POLES, POSTS, ETC.
- HORIZONTAL RAILINGS
- ROCKS, AND LANDSLIDES
- CONSTRUCTION MATERIAL

PARKED VEHICLES

- ON-STREET PARKING,
- OFF-STREET PARKING, AND
- LOADING FACILITIES
- BUS STOPS AND
- TAXI STAND

POSSIBLE CONTRIBUTING FACTORS FOR ACCIDENTS AT BLACK SPOT AREAS

AD SURFACE
YPE
OUGHNESS
RICTION

ERSECTION
YPE
UMBER OF LEGS
HANNELISATION
URN LANES
URNING RADIUS

PEDESTRIANS & CYCLISTS

- NUMBERS AND TYPES CROSSING FACILITIES
- PEDESTRIAN BARRIERS
- PEDESTRIAN REFUGES

SPEED

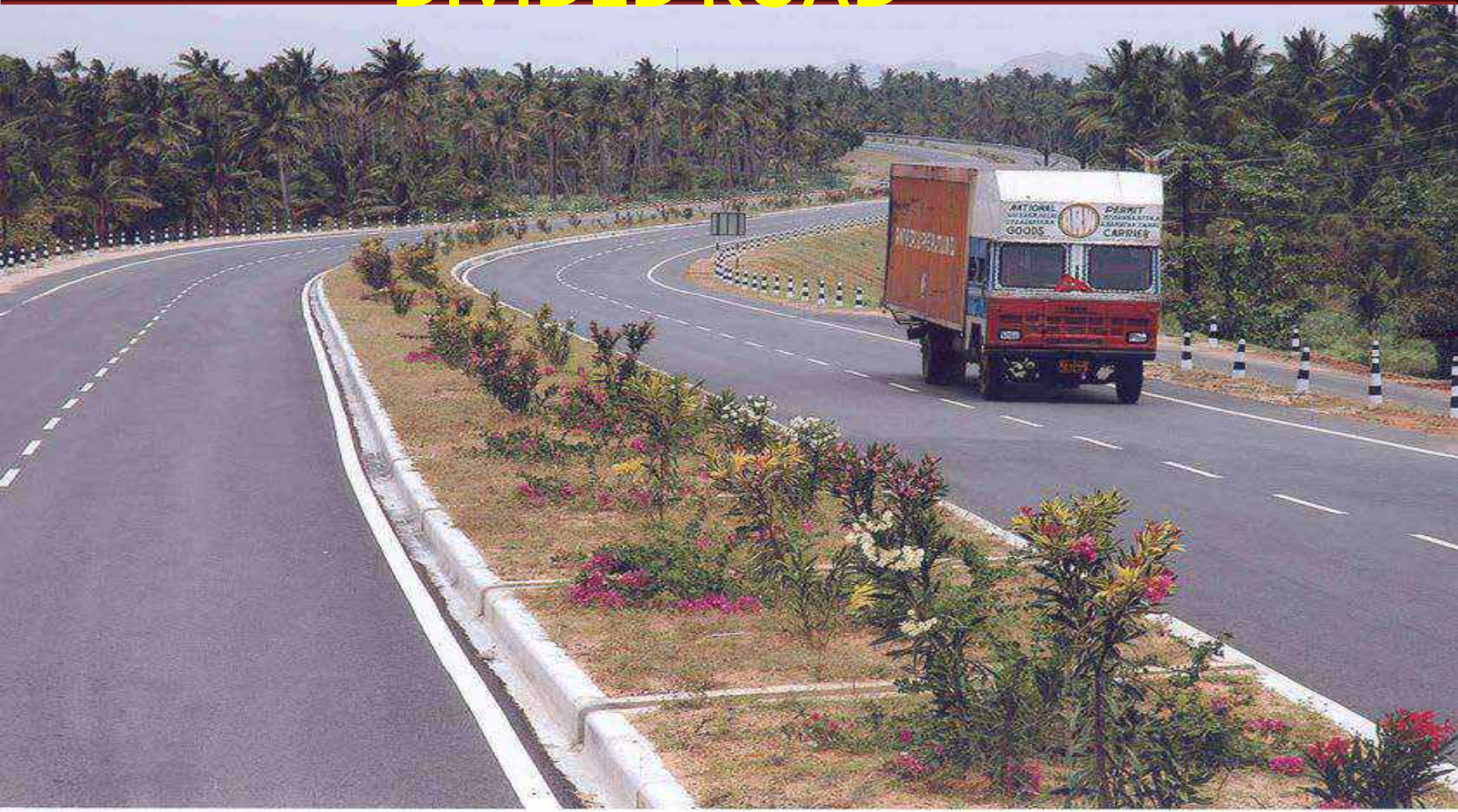
HAZARDOUS DRIVING

- SPEED LIMIT
- LATE BRAKING

ENVIRONMENT

- STRAY ANIMALS
- SCHOOL CHILDR
- HEAVY VEHICLES
- AMBIENT NOISE
- INGRESS/EGRES PROBLEMS

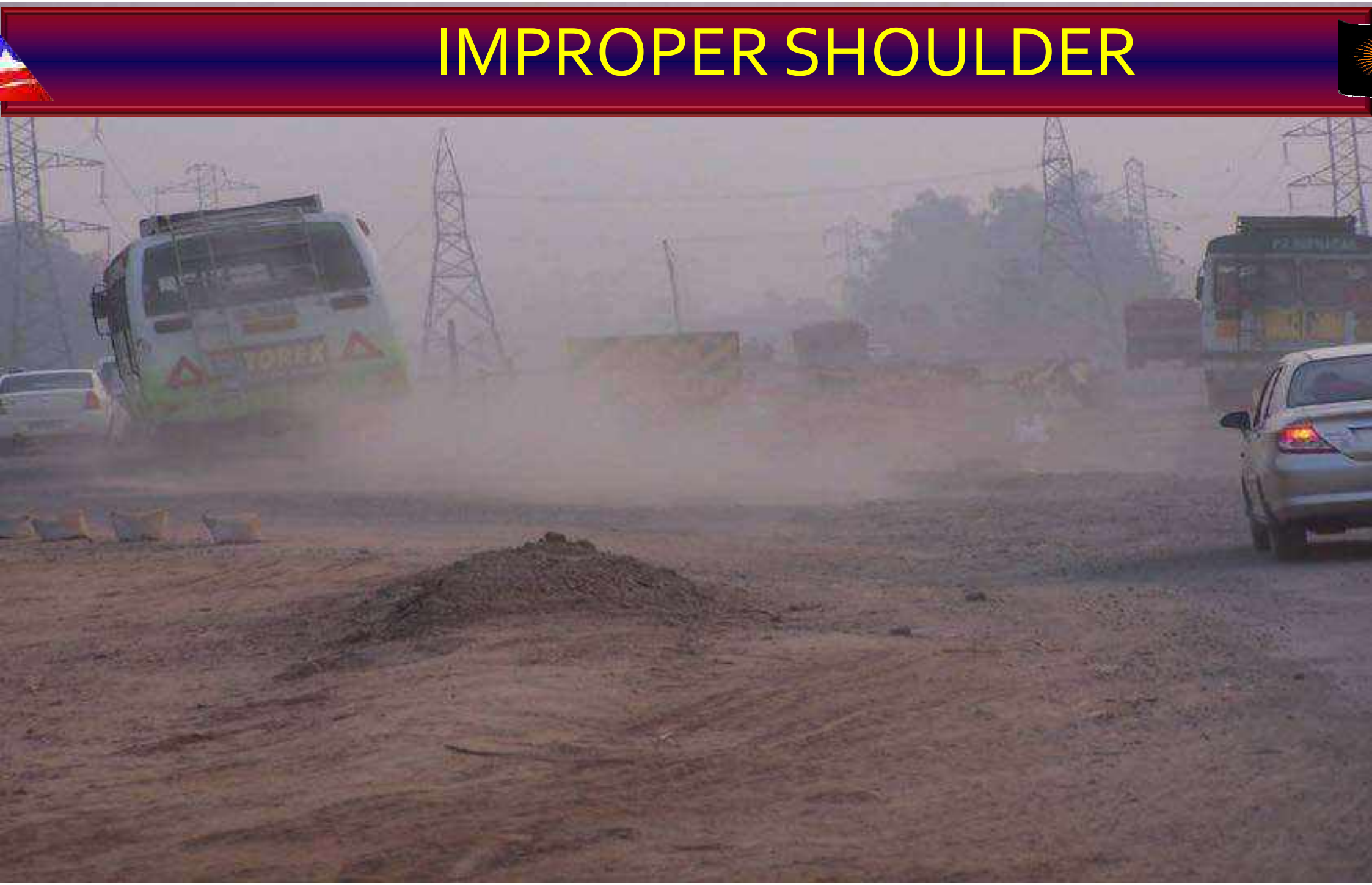
DIVIDED ROAD



UNDIVIDED ROADWIDTH

POOR GRADIENT

IMPROPER SHOULDER



DILAPITED FOOT-PATH

IDEAL KERB

POOR DRAINAGE

BAD LIGHTING

IMPROPER VISIBILITY

PRESENCE OF POLES AND POSTS

LANDSLIDES

OBSTRUCTION BY CONSTRUCTION MATERIAL

PEDESTRIANS DISPLACED BY PARKING

BUS STOP USED AS A RICKSHAW STAND

STRAY ANIMALS

Animal traffic

PEDESTRIANS CROSSING OVER MEDIAN

HAZARDOUS PRACTICES ON ROADS

PEDESREIAN FACILITY

FOOTPATH ENCROACHED BY TREES

FOOTPATH SUDDENLY DISAPPEARS

OVERLOADED VEHICLE

ORG MEASURES(CONTD)

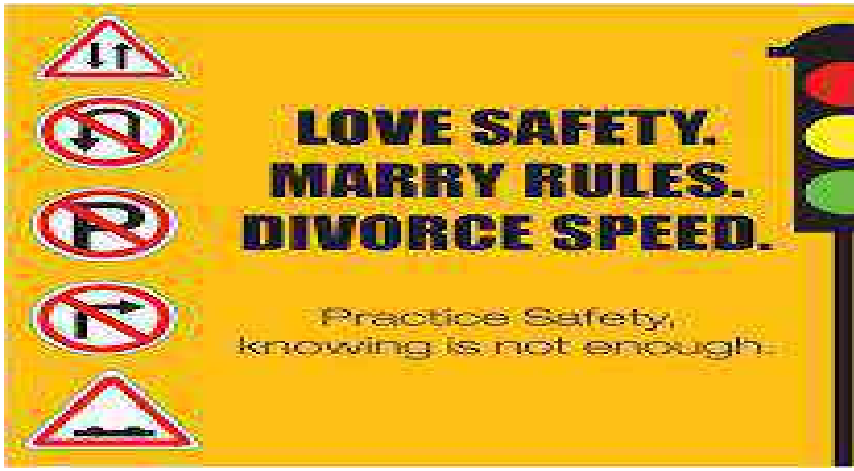
river Trg

- Institute of Driving Training and Research (IDTR) established to set standards and monitor driver training and issue driving license based on an objective scientific process of testing skills
- Est of Regional Driving Trg Center (RDTC) and DTC at district level

egular Road Safety Audits

ublic Awareness Campaigns

- Spread awareness through TV, films, radio spots and print media
- Conduct of road safety awareness wksp at state level and in Schools



ORG MEASURES (CONTD)

st and installation of tfc signals at all reqd juntions

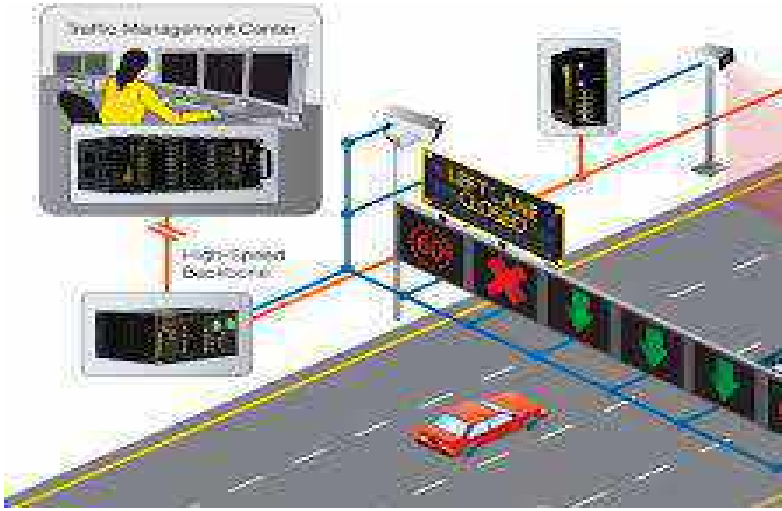
romoting Intelligent Transport System (ITS)

E- challan

M- parivahan

lacing of accidented vehs at prominent locs with caution bds

ccess management to control entry and exit points



peed cameras

INDL MEASURES

INDL MEASURES

OMPULSARY USE OF HELMETS

SAGE OF VEHS WITH FOLLOWING FEATURES

- AUTOMATIC HEAD LIGHT ON
- AIR BAGS
- VEH BASED TRACKING DEVICE
- ANTI LOCKING BRAKING SYSTEM AND ELECTRONIC STABILITY CONTROL

AINT AND UPKEEP OF VEHS

O DRINKING AND DRIVING

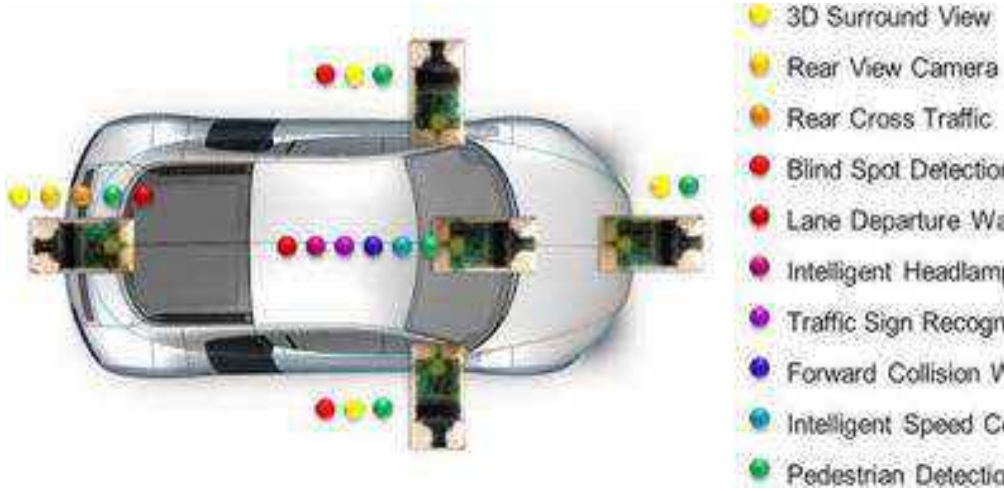
OLLOWING PROPER PARKING NORMS

PART IV : MODERN/INNOVATIVE MEASURES FOR REDN OF ACCIDENTS/SEVERITY

MODERN MEASURES FOR REDN OF ACCIDENTS/SEVERITY

ACHINE VISION

- ABILITY OF MACHINES TO GATHER AND INTERPRET VISUAL DATA.
- IMDT IDEN MISSING/ DAMAGED VEH PARTS
- CAPABLE OF IDEN OBJECTS IN ENVIRONMENT SUCH AS PEDESTRIAN, TRAFFIC LIGHTS



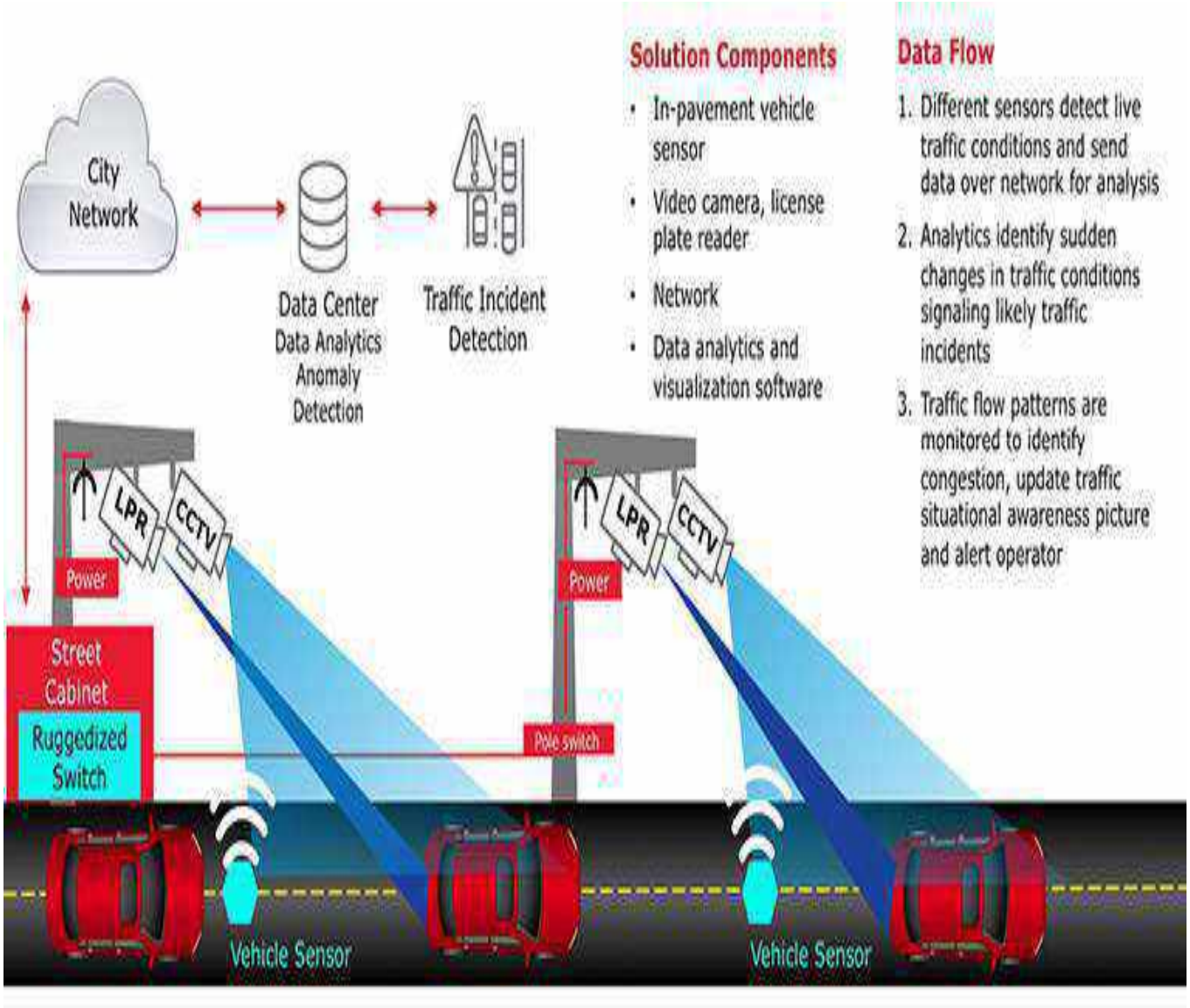
XPERT SYSTEMS

- CAN REDUCE JAMS BY MONITORING REAL TIME TRAFFIC DENSITY
- USE DATA TO DIVIDE TRAFFIC TO ALTERNATE
- ENHANCE TRACEABILITY

MODERN MEASURES FOR REDN OF ACCIDENTS/SEVERITY

RAFFIC INCIDENT DETECTION

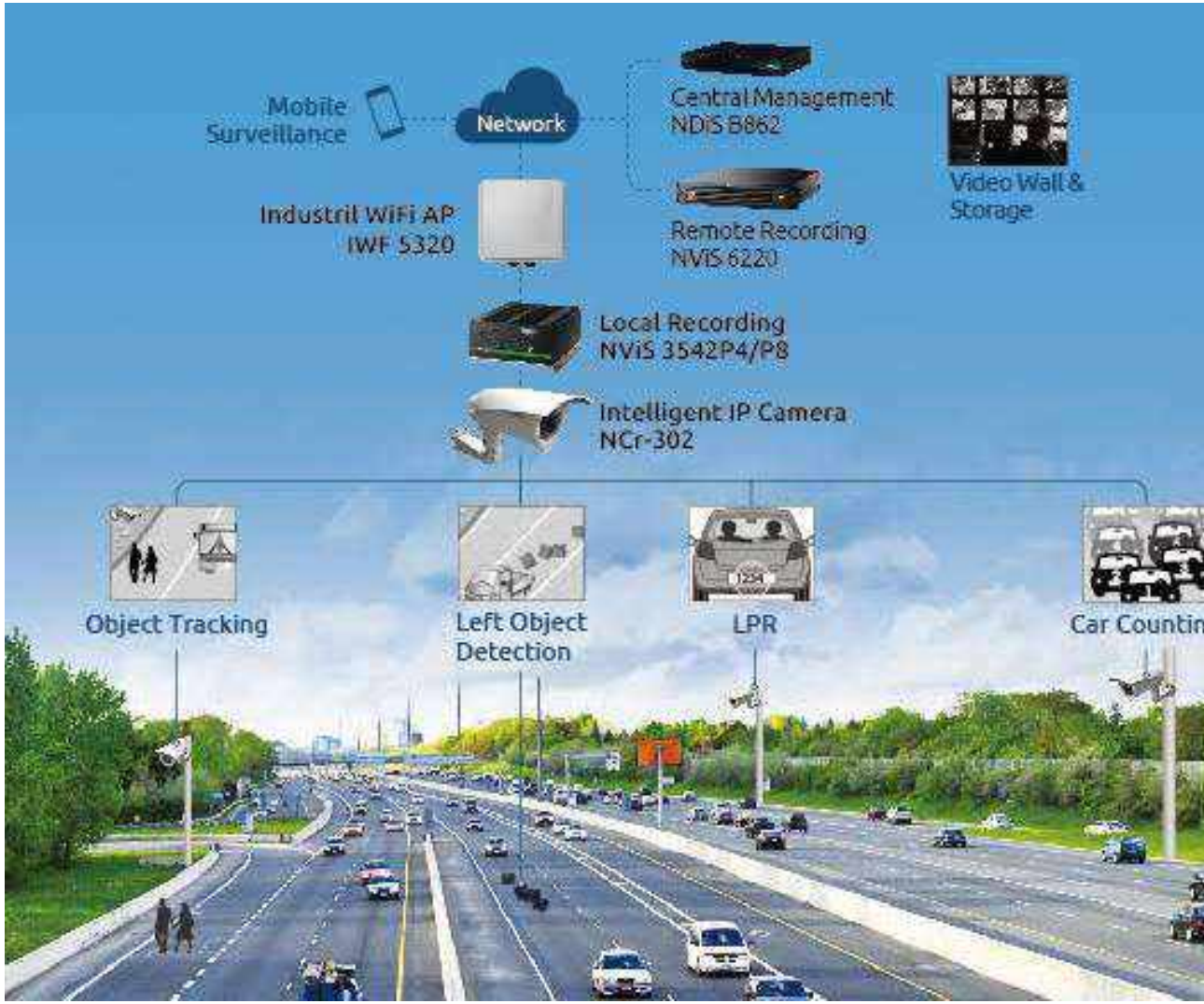
- DETECTS TRAFFIC INCIDENT BY USING AN IMPROVE AUTOMATIC INCIDENT DETECTION
- WARNING SYSTEM TRIGGERED BY SUDDEN CHANGES IN SPEED
- INFO PROVIDED TO DRIVERS THROUGH VARIABLE MESSAGE BDS, SUCCESSFUL IN REDUCING CONGESTION DUE TO INCIDENT



MODERN MEASURES FOR REDN OF ACCIDENTS/SEVERITY

NTELLIGENT HIGHWAYS

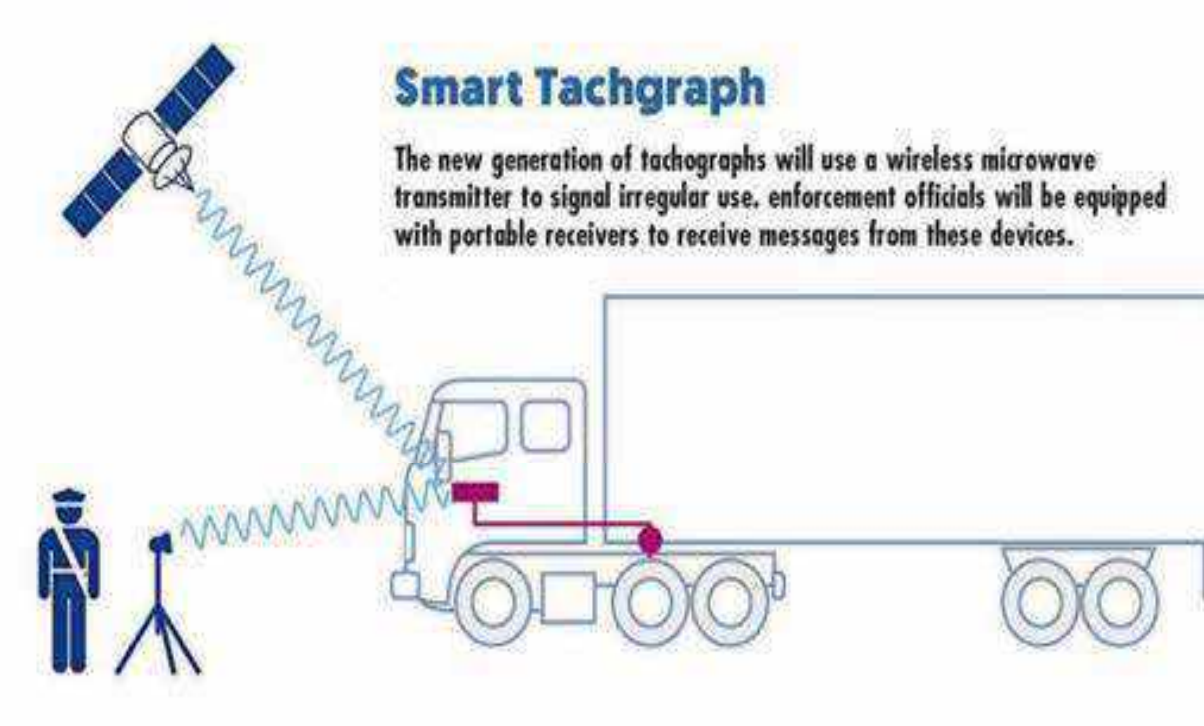
- DRIVER INFO TECHNOLOGY
  - ELECTRONIC ROUTE PLG
  - RADIO BROADCASTING OF INFO
  - ON BOARD VEHICLE ROUTING ADVICE
  - ON BOARD NAVIGATION SYSTEM
- TRAFFIC CONTROL TECHNOLOGY
  - SIGNAL SYNC PROGRAMS
  - FREEWAY AND CORRIDOR CONTROLS
- VEH CONTROL TECHNOLOGY
  - AUTO VEH IDENTIFICATION
  - REMOTE VEH CONTROL



MODERN MEASURES FOR REDN OF ACCIDENTS/SEVERITY

ECTRONIC TACHOGRAPH AND IN VEHICLES TECTORS

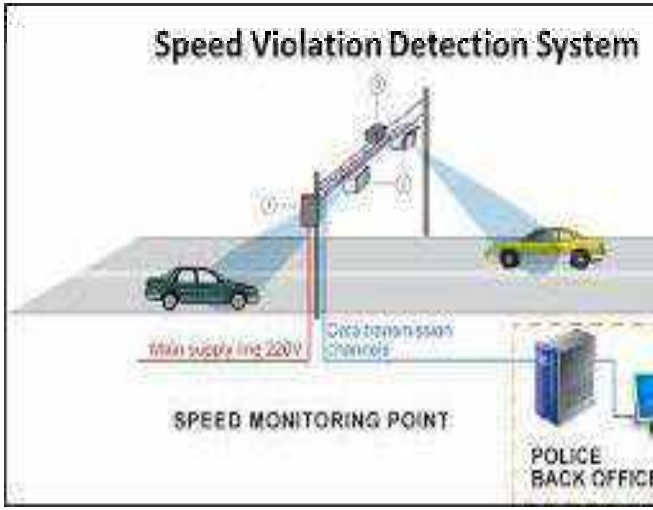
- MOTION SENSOR AND CONTROLLING UNIT INSTALLED IN TRUCKS AND BUSES
- MONITOR DRIVING PATTERN OF HEAVY VEHS
- DRASTICALLY REDUCE FRAUD LINKED TO SPEEDING
- TO STUDY EVENTS WHICH LED TO ACCIDENT
- PROVIDES SUPPORTING EVIDENCE IN CASE OF ACCIDENT



INNOVATIVE MEASURES FOR REDN OF ACCIDENTS/SEVERITY

OW IN THE DARK MARKINGS

- SOLAR ABSORBING LUMINESCENT PAINT THAT CHARGES ALL DAY IN THE SUN
- GLOWS FOR ABOUT EIGHT HOURS WHEN IT GETS DARK
- CAPABILITY TO MAKE RDS SAFER, WHILE ELIMINATING THE NEED FOR STREET LIGHTS IN SOME AREAS, ALSO REDUCING ENERGY USE



TOMATED SPEED DETECTORS

- MEASURES SPOT SPEED
- TAKE PICTURE WHEN VEHICLE IS DETECTED OVER SPEEDING
- INTEGRATED SYSTEM TO GENERATE E- CHALLAN

INNOVATIVE MEASURES FOR REDN OF ACCIDENTS/SEVERITY

PEDESTRIAN CROSSING

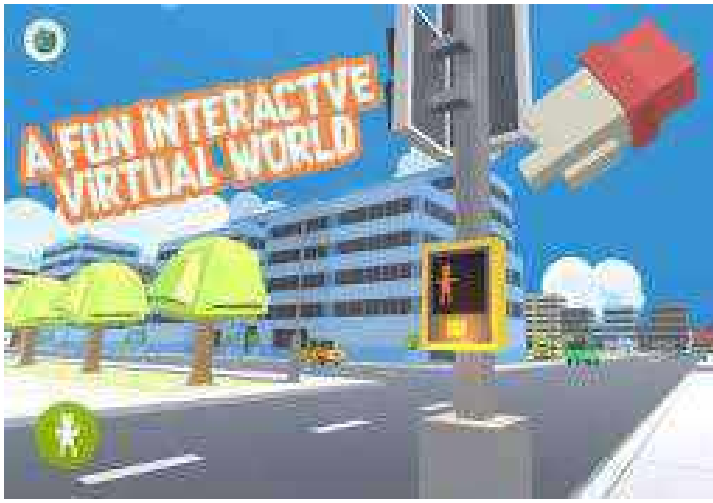
- APPEARS FLAT TO PEDESTRIAN WHILE 3D TO DRI
- MORE STRIKING THAN 2D LINES
- FORCES DRIVER TO SLOW DOWN

FE SAVING STICKERS

- RAISES AWARENESS IN RESIDENTIAL AREAS
- SEEKS ATTENTION OF MOTORISTS
- PROVIDES SAFETY TO CHILDREN PLAYING IN THE

INNOVATIVE MEASURES FOR REDN OF ACCIDENTS/SEVERITY

EHAVIOURAL TRAINING



- PROVIDES EARLY RD SAFETY EDUCATION
- EARLY INTERVENTION THROUGH A MULTIMEDIA APPROACH

  WILL HELP DEVELOP POSITIVE ATTITUDE AND BEHAVIOUR

  TOWARDS RD SAFETY

MART TRAFFIC LIGHTS

- AUTOMATICALLY EXTENDS THE GREEN PEDESTRIAN CROSS

  PHASE WHEN MANY PEOPLE ARE WAITING
- CAMERAS “SEE” A CRITICAL MASS OF PEDESTRIANS, THEY

  WILL THEN TRANSMIT THIS BIT OF INFORMATION TO A CONTROL

  CENTER THAT WILL KEEP THE “WALK” SIGN LIT FOR LONGER

  PERIODS OF TIME

INNOVATIVE MEASURES FOR REDN OF ACCIDENTS/SEVERITY

BLE BARRIERS

- HI-TECH BARRIERS HELP ENSURE ROAD USER PROTECTION
- THE WIRED BARRIERS CAN STRETCH AND BETTER ABSORB THE FORCE OF A VEHICLE CRASHING INTO THEM
- HELP PREVENT THE CAR FROM MOVING INTO THE WAY OF ONCOMING TRAFFIC

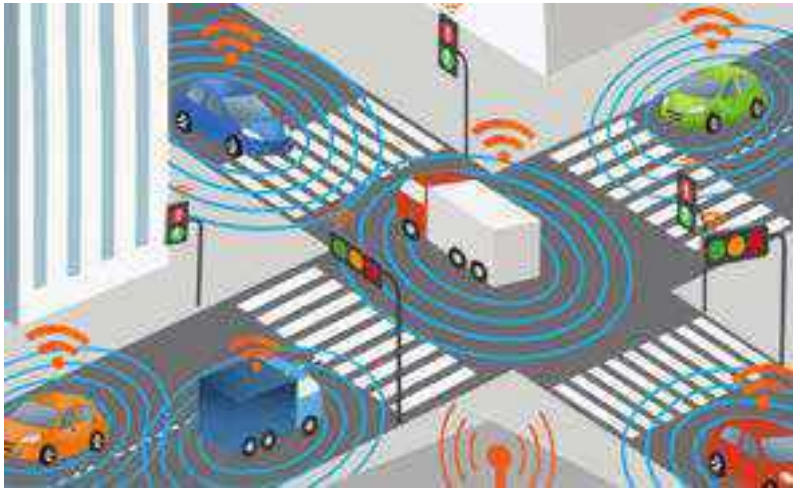
RIABLE MESSAGE BDS

- LED BOARDS THAT DISPLAY INFORMATION THAT COMMUTERS, DRIVERS AND PEDESTRIANS NEED TO KNOW
- UPDATE ROAD USERS ABOUT REAL-TIME ROAD AND TRAFFIC CONDITIONS LIKE CONGESTION,ACCIDENTS

INNOVATIVE MEASURES FOR REDN OF ACCIDENTS/SEVERITY

ARMONIC RADAR SYSTEM

- TO WARN THE ONSET OF HAZARDOUS SITUATION
- OVER RIDE DRIVERS CONTROL AND MODERATE COLLISION IMPACT



HE SAFETY EDGE

- SHAPING THE EDGE OF THE PAVEMENT WITH A 30-DEGREE LIP THAT WARNS DRIVERS FROM DROPPING OFF THE ROAD IF THEY DRIFT ON THE WAY
- PROVIDES A DURABLE AND ROBUST SAFETY FEATURE THAT ALLOWS DRIVERS TO RE-ENTER THE ROADWAY SAFELY
- HELPS STABILIZE AND REDIRECT VEHS AS THEY ENTER THE ROADWAY

INNOVATIVE MEASURES FOR REDN OF ACCIDENTS/SEVERITY

PUBLIC CONVENIANCE

AT EVERY 50 / 100 KM P UBLIC CONVENIENCE SHOULD BE AVAILABE, FOR DRIVER'S PERFORMANCE OF ABLUTIONS

4E-FEATURED DISCIPLINE

- ENFORCEMENT
- EDUCATION
- ENGINEERING
- EMERGENCY CARE

ENFORCEMENT

THE MOTOR VEHICLE ACT , IF ENFORCED CORRECTLY, WOULD CURB TRAFFIC VIOLATIONS BY DRIVERS.

THE ENFORCEMENT OF THE RULES IS THE RESPONSIBILITY OF THE GOVERNMENT.

ENFORCEMENT

STRICT ENFORCEMENT OF SPEED LIMIT.

RULE FOR DRIVING LICENSE SHOULD BE MADE MORE FOOLPROOF.

HELMET SHOULD BE MADE COMPULSORY.

THE PRACTICE OF KEEPING TRAFFIC SIGNAL OF DURING NIGHT SHOULD BE DISCONTINUED.

REFRESHMENT ROOM SHOULD BE AVAILABLE AT EVERY 50/100 KM ON THE HIGHWAY.

ENFORCEMENT

ONE WAY TRAFFIC SHOULD BE IMPLEMENTED AS FAR AS POSSIBLE.

MEDIANS SHOULD BE MARKED ON THE ROAD OF TWO WAY TRAFFIC.

ZEBRA CROSSING SHOULD BE PROVIDED ON ROAD CROSSING FOR PEDESTRIANS AND ALSO ON SPEED BREAKER.

ANIMALS SHOULD BE ELIMINATED COMPLETELY FROM THE ROAD.

SIZE AND SHAPE OF HUMP SHOULD BE PROPERLY DESIGNED AS PER STANDARD CODE.

OBSTRUCTION ON ROAD SIDE DUE TO CONSTRUCTION MATERIAL SHOULD BE ELIMINATED COMPLETELY.

ONLY HEALTHY VEHICLES SHOULD BE ALLOWED ON ROAD.

EDUCATION

TRAFFIC EDUCATION IS DEFINED AS ANY KIND OF FORMAL OR INFORMA
EDUCATION THAT IS AIMED AT LEARNING AND IMPROVING TH
KNOWLEDGE , SKILLS AND INSIGHT THAT ARE NECESSARY FOR SAI
TRAFFIC PARTICIPATION.

AWARENESS IS GENERATED THROUGH VARIOUS ROAD SAFET
CAMPAIGN. THE GOVERNMENT HAS BEEN UNDERTAKING VARIOU
PUBLICITY THROOUGH TV AND OTHER PROFESSIONAL AGENCIES.

TRAFFIC PARK SHOULD BE ESTABLISHED AT EVERY BRTF LEVEL OF OU
ORGANISATION.

EDUCATION

- Safety awareness should be imbibed from childhood
- Riders should maintain a safe distance while travelling
- Reflectors should be fixed on front and back of every vehicle.
- Riders should maintain a safe distance while travelling.
- Vehicle should not be parked on roadside.
- Vehicles should be slowed down near junction or inhabitant areas.

EMERGENCY CARE

THE SCHEME ENTAILS PROVIDING CRANES AND AMBULANCES F
RELIEF AND RESCUE MEASURES IN THE AFTERMATH
ACCIDENTS BY WAY OF EVACUATING ROAD ACCIDENTS VICTIMS
NEAREST MEDICAL AID CENTRE AND FOR CLEARING T
ACCIDENT SITE.

RECOMMENDATIONS FOR IMDT CONSIDERATION

NFORCEMENT-NO/NEGLIGIBLE ENFORCEMENT FORCE IN ORWARD AREAS WHERE BRO IS WORKING-EST OF POLICE TATIONS

DUCATION- CATCH THE CHILDREN YOUNG-EST TRAFFIC ARKS IN THE AOR OF EACH TASK FORCE.

NGINEERING-DPR PREP WITH UTMOST INVOLVENT; ROAD URNITURE RAEs; SLOPE STABILISATION WORKS WHEREVER EQD; REDUCTION OF CROWNS;REGULAR ROAD AUDITS AND ORRECTIVE MEASURES

MERGENCY CARE-CREATE AN EMERGENCY CARE GRID IN ORWARD AREAS WITH THE HELP OF Osc WKSP,RMOs AND FNAs-GET CIV ADM INVOLVED-PUBLICIZE LOCS ON VEBSITES FOR EMERGENCY ASSISTANCE

JAI HIND