## **DELHI MOHALLAS**

THE EVOLUTION OF A NEIGHBOURHOOD & ITS CPTED

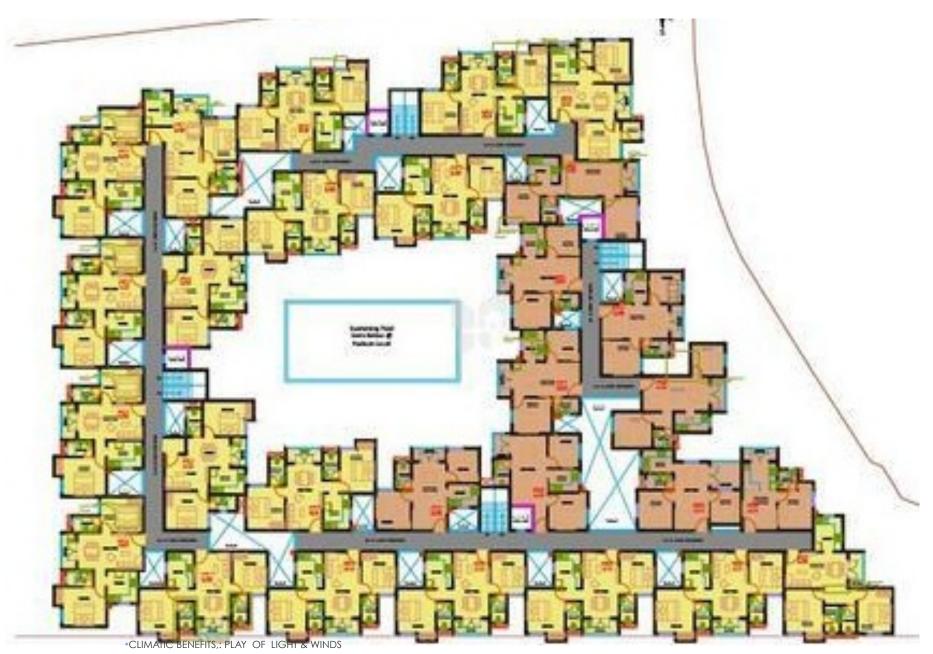
### AR. MANJARI KHANNA KAPOOR

PRACTISING ARCHITECT & ACADEMICIAN AUGUST 2017

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## MOHALLA OR NEIGHBOURHOOD

CLUSTER PLANNING, COURTYARD/OPEN SPACES



- •HOMOGENEITY- ECONOMIC, SOCIAL, RELIGIOUS & REGIONAL
- •FAMILIAL & LOGISTICAL INTERDEPENDENCE
- SUSTAINABILITY FOR ALL AGE GROUPS
- •CASUAL SURVEILLANCE & HIERARCHY OF TERRITORIALITY- SOCIAL SECURITY

STREET CULMINATING IN SQUARE



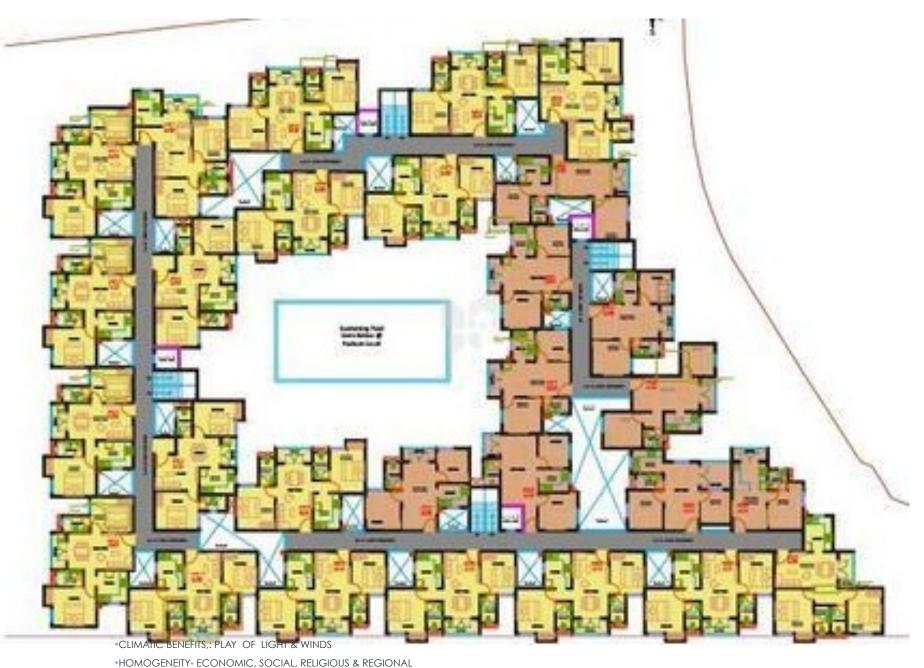
RESIDENCES AROUND A COURTYARD



MODERN SETTLEMENT PLANNING - INSPIRED

## MOHALLA OR NEIGHBOURHOOD

CLUSTER PLANNING, COURTYARD/OPEN SPACES



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- SUSTAINABILITY FOR ALL AGE GROUPS
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MOHALLA: CLUSTER FORM OF PLANNING SPACES ORGANISED AROUND AN INTERACTIVE OPEN SPACES

## MY CITY, MY NEIGHBOURHOOD, MY STREET

## STORY OF THE EVOLUTION

1970S: INCEPTION – CPTED AT PLAY

2000S: TROUBLES - CPTED ALTERED

NOW: CORRECTIONS & EFFORTS







## **INDIA**

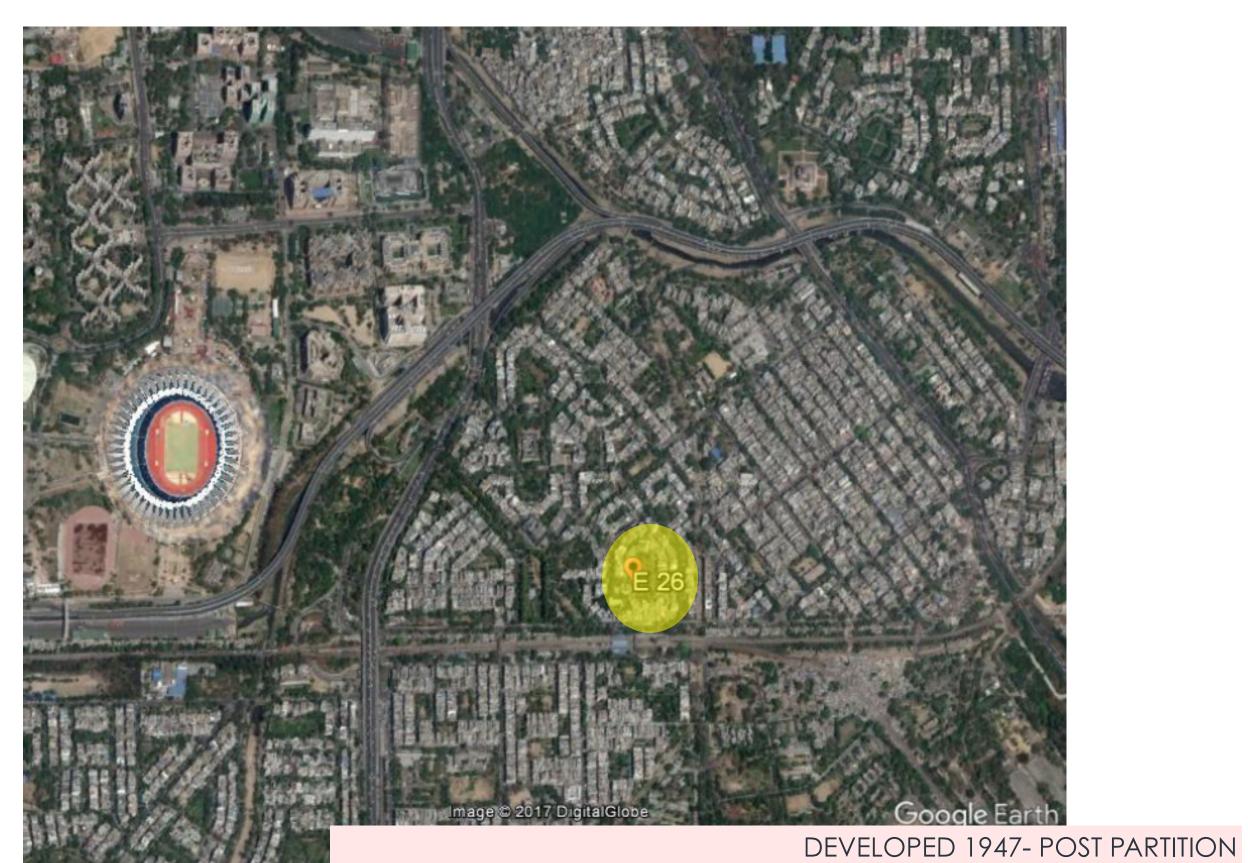
A BURGEONING STATE





## MY NEIGHBOURHOOD

PLOTTED RESIDENCES – 250-300 SQ YDS



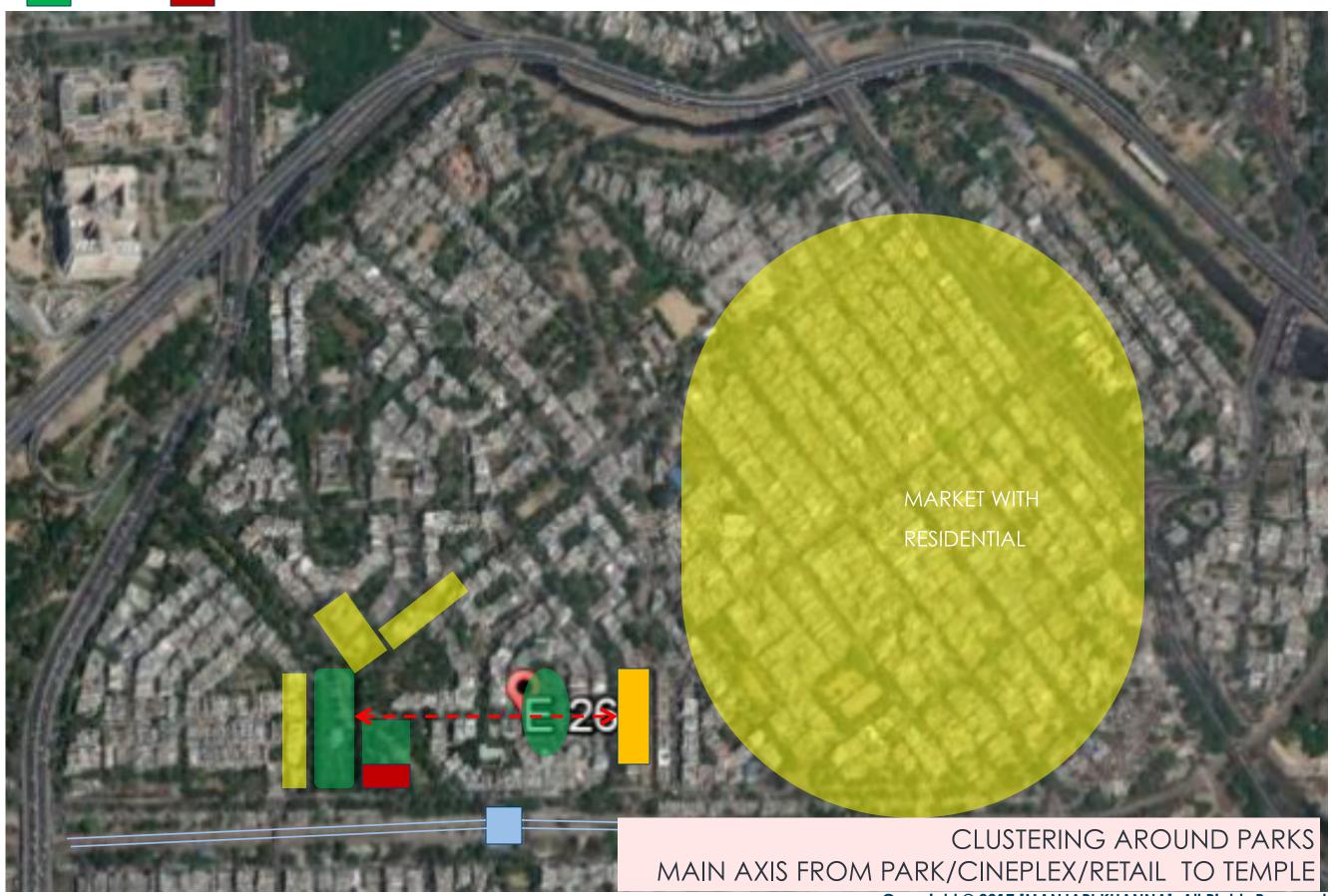
FOR REFUGEES FROM LAHORE DUE TO THE FORMATION OF PAKISTAN

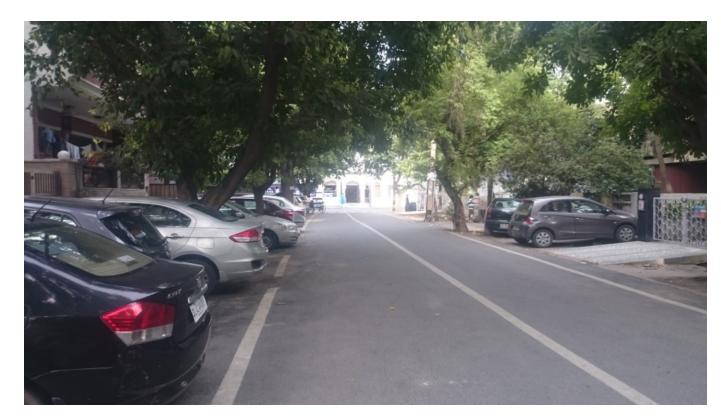
**UD CONTEXT** 



**UD CONTEXT** 













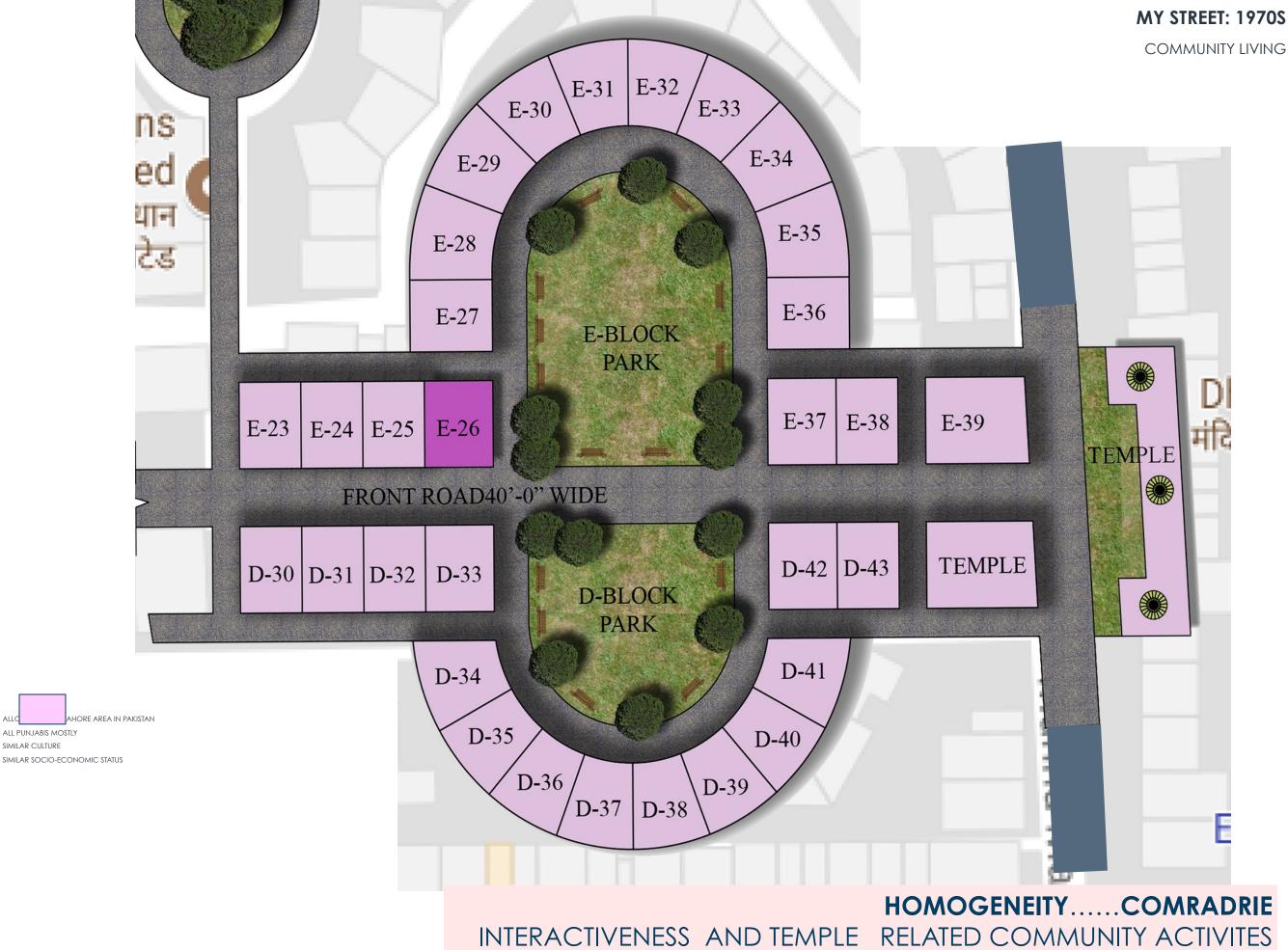




A QUIET NEIGHBOURHOOD WITH REAL ESTATE COST @200 \$/SFT & YET NO GATES , BARRICADES OR CHECKS

## **MY MOHALLA**

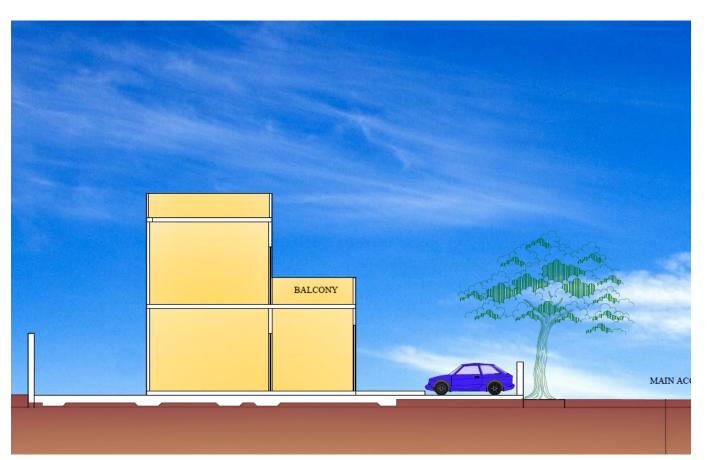
1970S: INCEPTION – CPTED AT PLAY



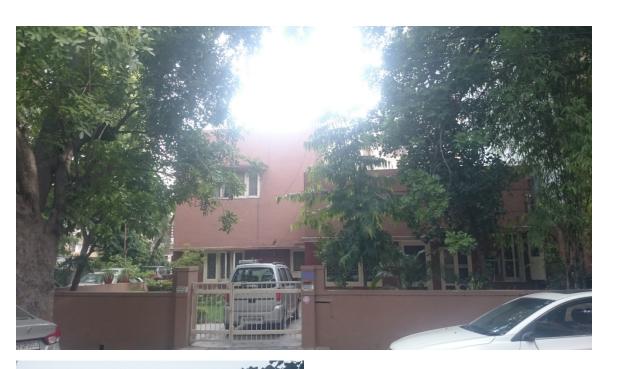
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**BUNGALOWS-EXTROVERTED** 





**BUNGALOWS-EXTROVERTED** 









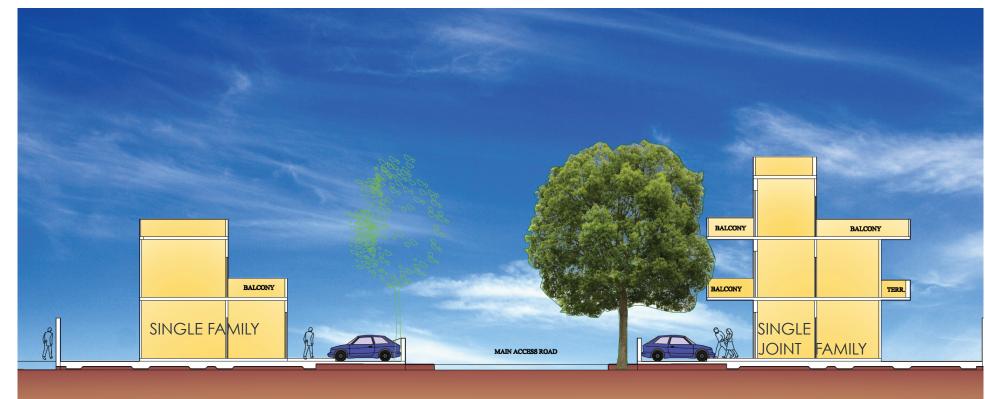


IN LINE WITH MOST CPTED PRINCIPLES CASUAL SURVEILLANCE, TERRITORIALITY MOST OF ALL

**MY STREET: 1970S** 

INTERACTIVE STREETS

1.STREET LIFE, INTERACTION
2.LIMITED VEHICLES- OFF STREET
PUBLIC, = STREETS
SEMI PUBLIC = PARKS
SEMI PVT = VERANDAHS/BALCONIES
PRIVATE = HOMES



TYPICAL STREET SECTION



**MY STREET: 1970S** 

INTERACTIVE STREETS

1.STREET LIFE, INTERACTION
2.LIMITED VEHICLES- OFF STREET
PUBLC, = STREETS
SEMI PUBLIC = PARKS
SEMI PVT = VERANDAHS/BALCONIES
PRIVATE = HOMES

PARK – MARRIAGES, FUNCTIONS
PLAY AREA/CHILDREN'S ZONE
ACCESS CONTROL
OUTSIDER IDENTIFICATION
CASUAL SURVEILLANCE

KEY PLAN >>>



TYPICAL STREET SECTION



TYPICAL SECTION THROUGH THE PARK

INTERACTIVE STREET WITH VISUAL LINK CENTRAL PARK- FOR PLAY & PRIVATE FUNCTIONS

# 1990-2000S

TROUBLES & TRIBULATIONS

### **NATIONAL CAPITAL REGION**

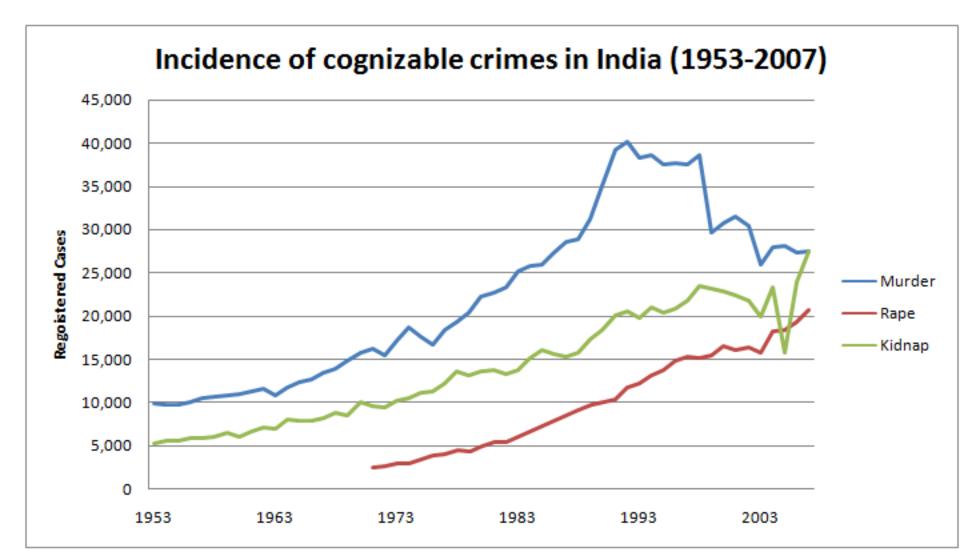
CRIME CAPITAL



ALARMING JUMP IN CRIME RATES ACROSS THE COUNTRY

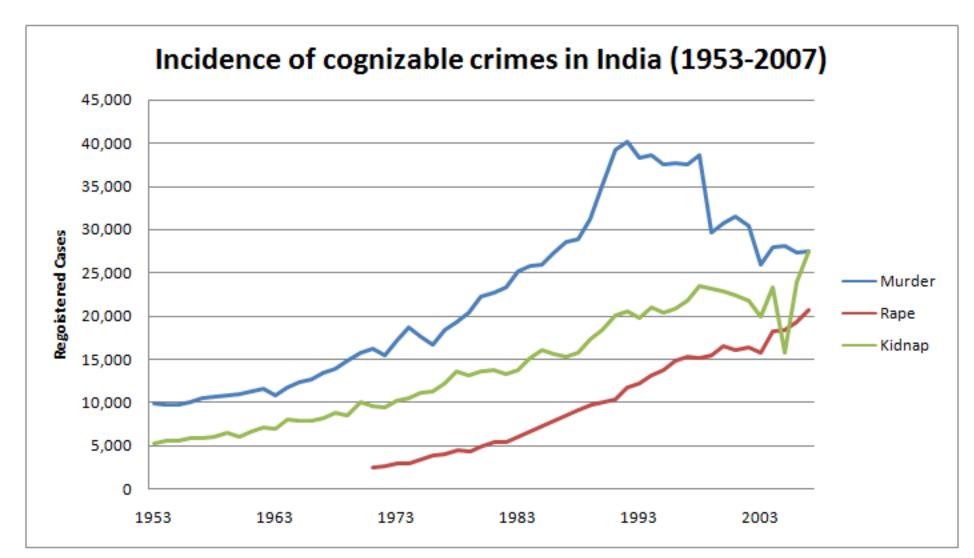
#### NATIONAL CAPITAL REGION

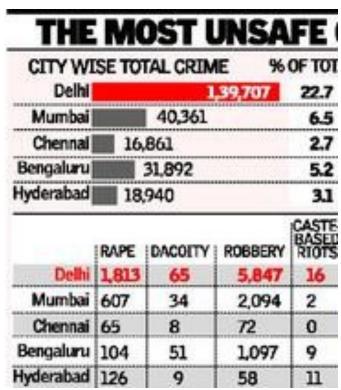
CRIME CAPITAL





CRIME CAPITAL

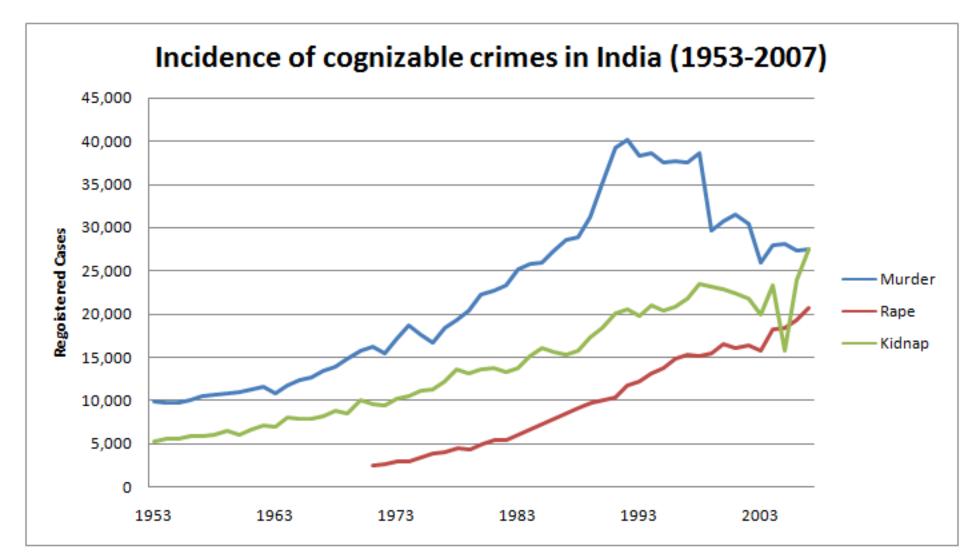






ALARMING JUMP IN CRIME RATES ACROSS THE COUNTRY DELHI MOST UNSAFE- FOR A BRIEF PERIOD

CRIME CAPITAL



CITY WI	SE TO	TAL CRIM	IE %	OF TOT
Delhi			39,707	22.7
Mumbai	40,361			6.5
Chennal	16,861			2.7
Bengaluru	31,892			5.2
Hyderabad	18,940			3.1
	RAPE	DACOITY	ROBBERY	CASTE BASEL RIOTS
Delhi	1,813	65	5,847	16
Mumbai	607	34	2,094	2
Chennai	65	8	72	0
Bengaluru	104	51	1,097	9
Hyderabad	126	9	58	11



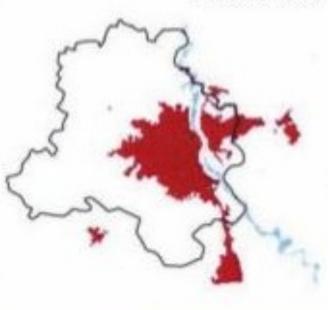


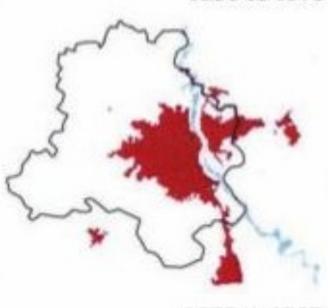
ALARMING JUMP IN CRIME RATES ACROSS THE COUNTRY DELHI MOST UNSAFE- FOR A BRIEF PERIOD

1950 to 1975

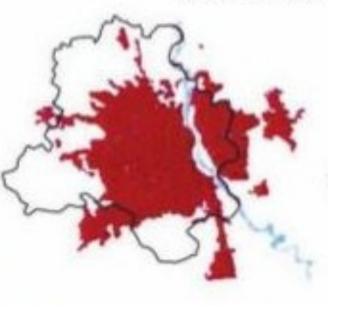
CAUSE 1

DELHI TO NATIONAL CAPITAL REGION

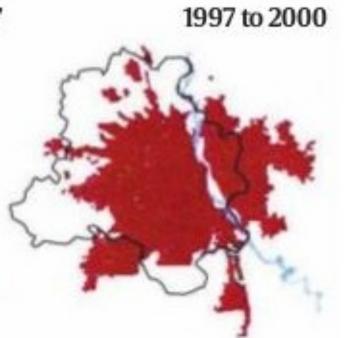


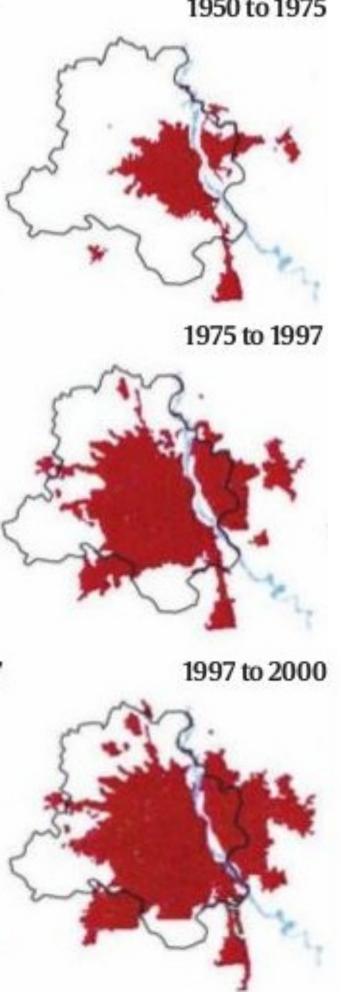


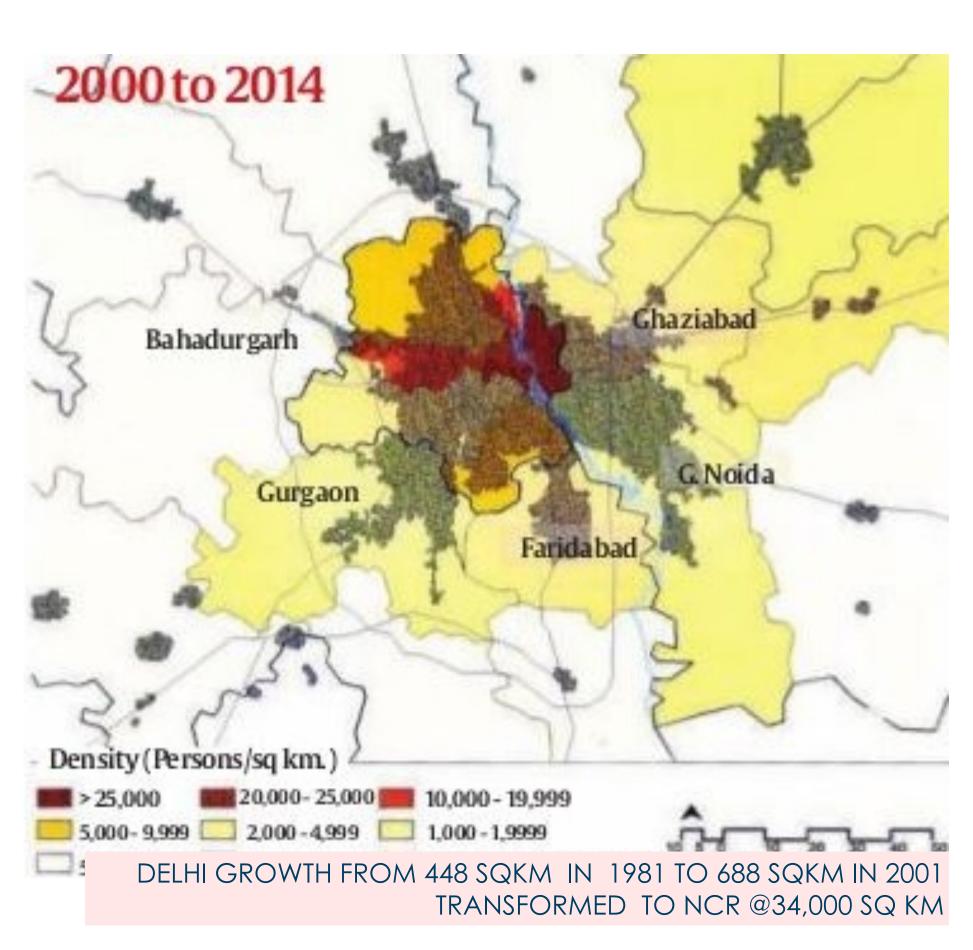
1975 to 1997











URBANIZATION- SOCIOLOGICAL



#### SOCIOLOGY OF URBAN IMMIGRATION:

- DIVISION OF LAND OVER LARGE FAMILY SIZE
- •FRIILITY AND DEPENDENCE SOLELY ON AGRICULTURE

  •FAMILY STRUCTURE AND RURAL SOCIAL STRUCTURES
- POVERTY AND JOB PROSPECTS IN URBAN /METROS

URBANIZATION- SOCIOLOGICAL



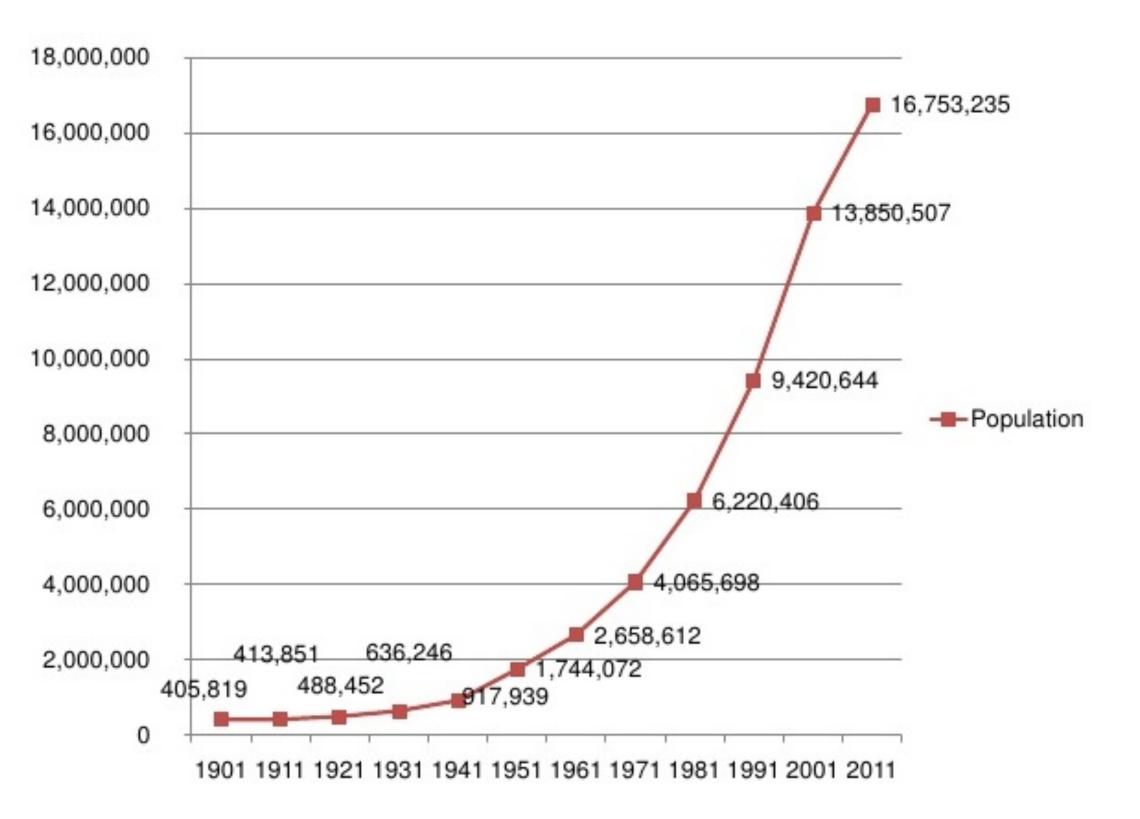
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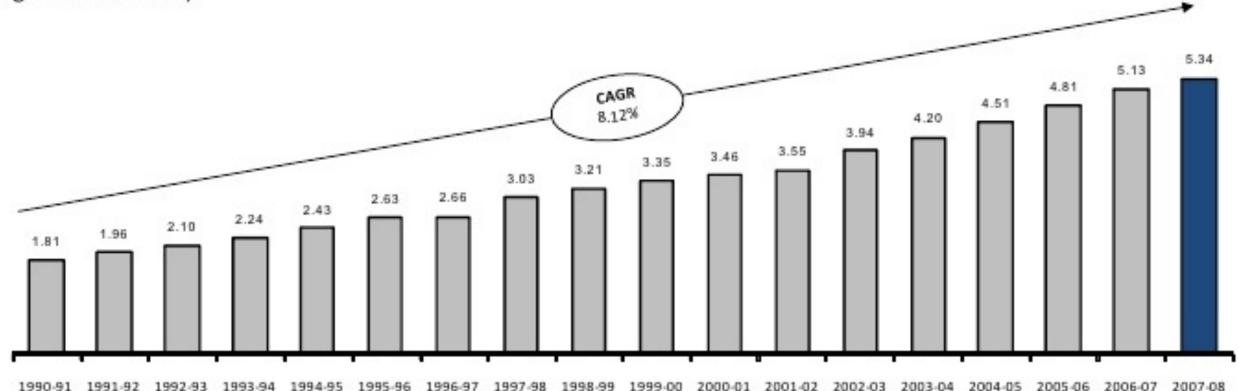


RURAL MIGRATIONS IN SEARCH OF LIVELIHOOD & BETTER LIFE GROWTH OF MIGRANT, DISSATIFIED & POOR POPULATION



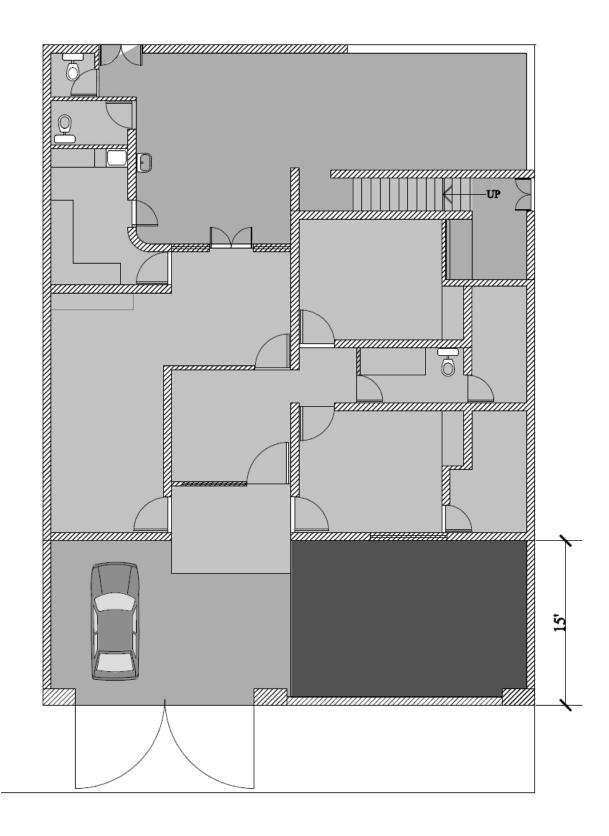
### Vehicles Registration in Delhi - 1990-2008

(Figures in millions)



Source: Transport Department, GNCTD

PLANS



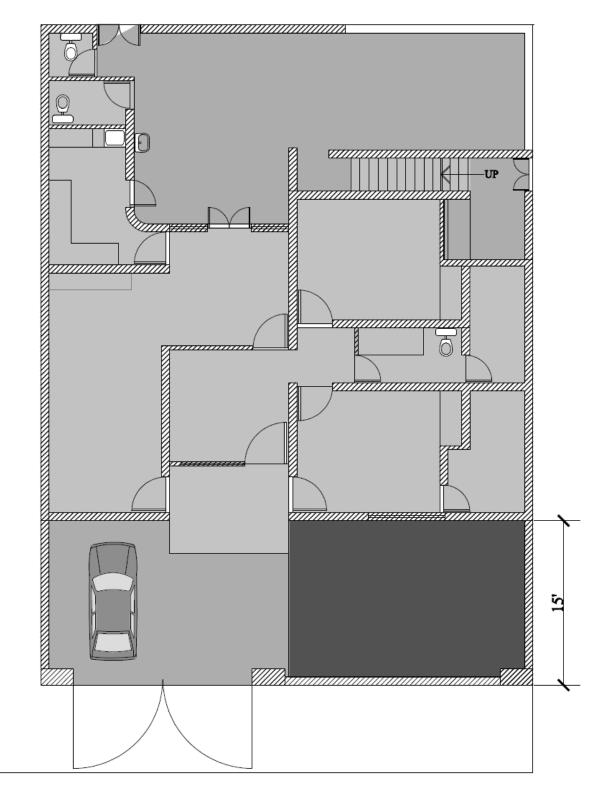
1970S:

1 TO 1.5 FAMILIES PER UNIT GROUND COVERAGE: 40-50%

FSI: 140 TO 150 = 1.5 TO 2.5 STOREY STRUCTURES = 2250 SFT MAX

TRANSFORMATION OF URBAN SCALE, STREET CHARACTER & DEMOGRAPHY

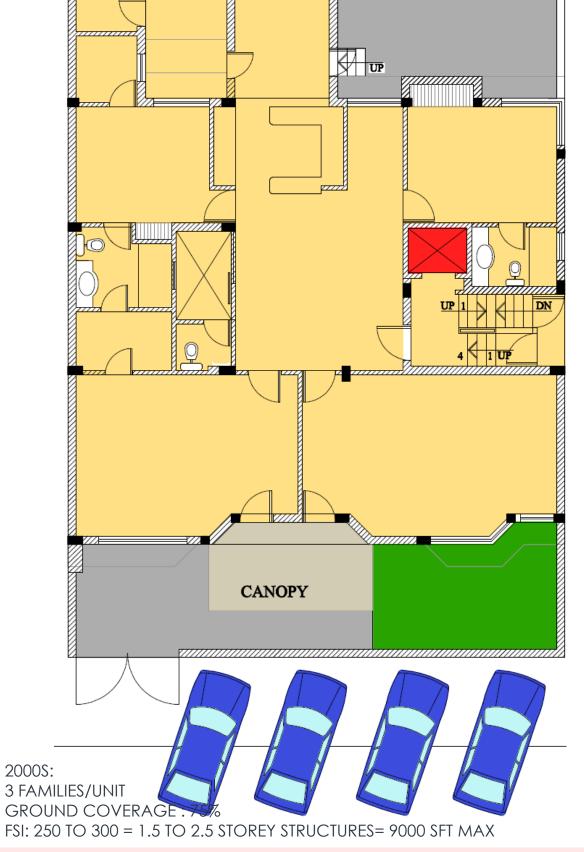
PLANS



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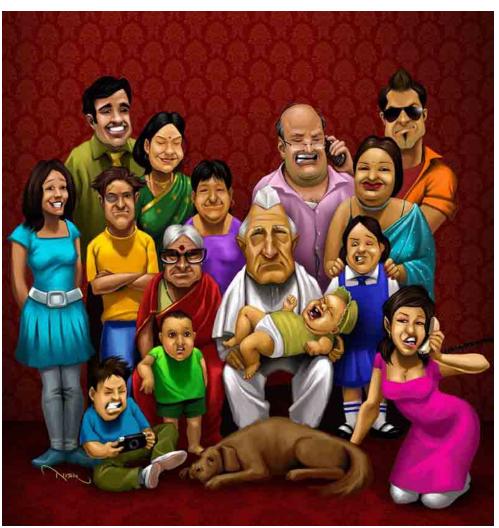
FSI: 140 TO 150 = 1.5 TO 2.5 STOREY STRUCTURES= 2250 SFT MAX



TRANSFORMATION OF URBAN SCALE, STREET CHARACTER & DEMOGRAPHY **DENSIFICATION** TO ACCOMMODATE NUMBERS & CONTAIN URBAN SPRAWL

FAMILY SYSTEM





FAMILY SYSTEM

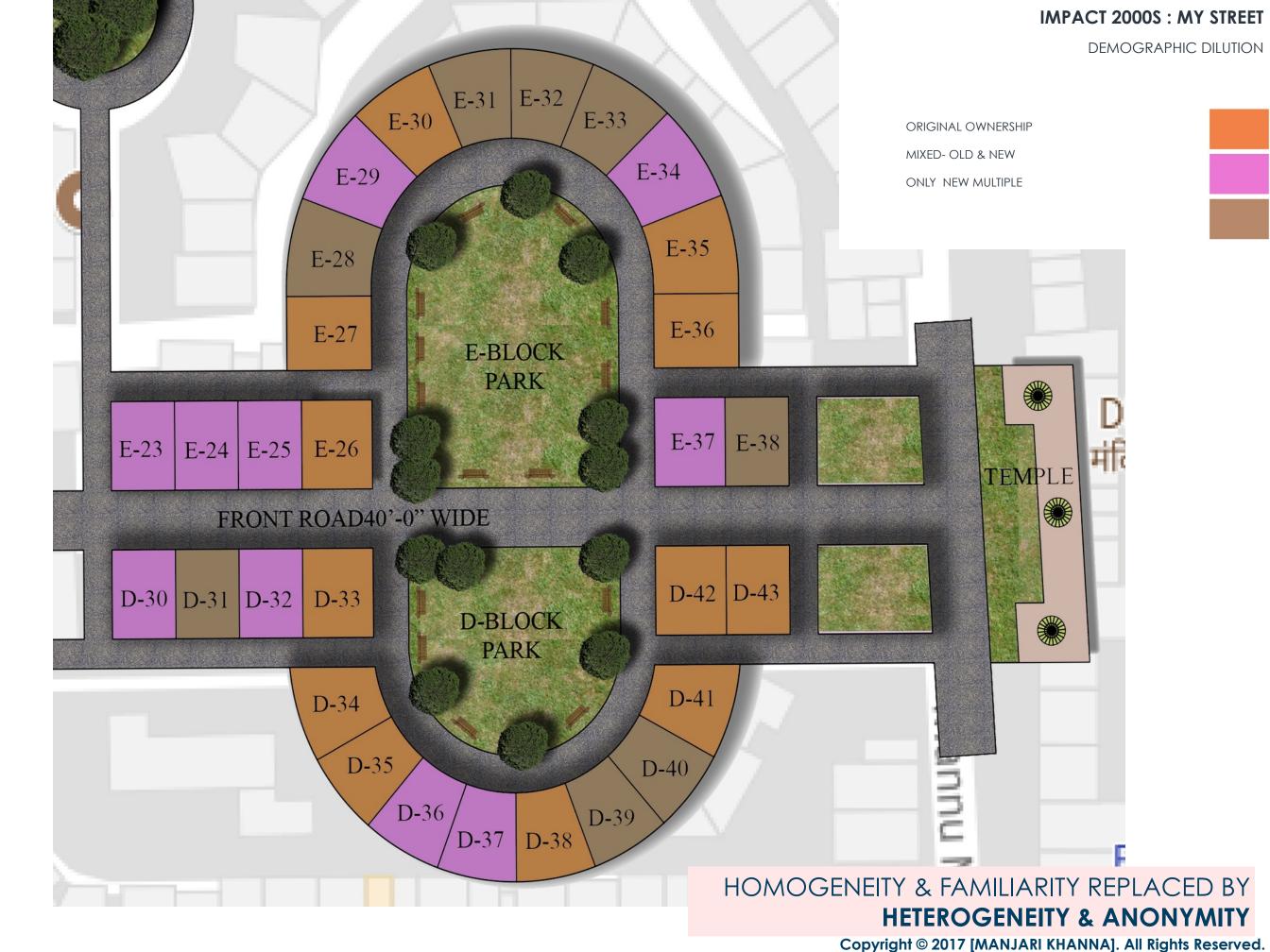


- •2 OR 3 BED UNITS- SPACE CRUNCH
- •FAMILY OF 4 OR 5
- •CLAN TO JOINT FAMILY TO NUCLEAR
- •EITHER LONELY KIDS OR LONELY PARENTS

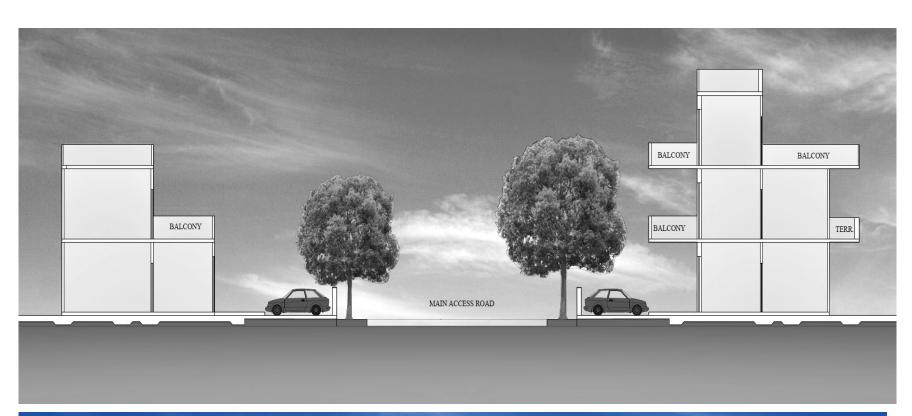




LIMITED SURVEILLANCE & INTROVERTED EXISTENCE DEAD & NEGLECTED COMMON AREAS- NO SENSE OF OWNERSHIP



**CPTED CHANGE** 



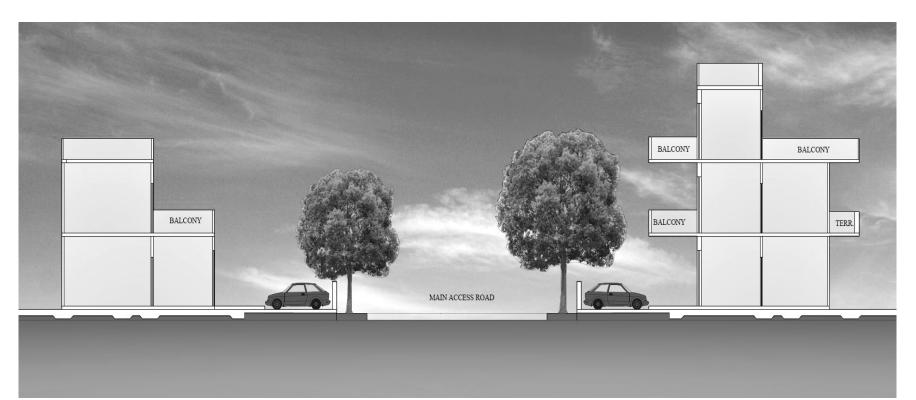
- 1. MULTIPLE FAMILIES
- 2. LESS OPEN SPACE
- 3. MORE CARS AND ON STREET/SIDEWALK
- 4. LIMITED INTERACTION- ALIENATION
- 5. PUBLC & PRIVATE MOSTLY
  SEMI PUBLIC UNUSED
  SEMI PVT NOT USABLE
- 6. NEGLIGIBLE OUTDOOR ACTIVITES
  - & NO CASUAL SURVEILLANCE



### LOSING GRIP ON ALL CPTED BASICS

CASUAL SURVEILLANCE, TERRITORIALITY & MAINTENACE....

**CPTED CHANGE** 



- 1. MULTIPLE FAMILIES
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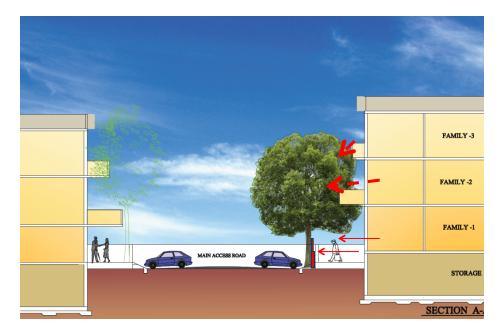


### LOSING GRIP ON ALL CPTED BASICS

CASUAL SURVEILLANCE, TERRITORIALITY & MAINTENACE....

VEHICULAR CONGESTION





SECTION OF STREET VS PARKING

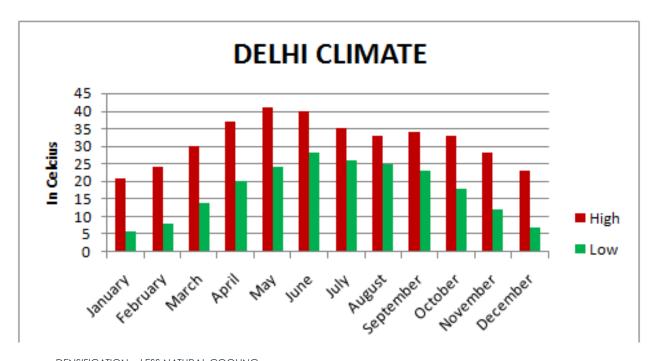
#### TYPICAL STREET CONGESTED WITH PARKING

#### INCREASED PARKING

- APPROX. 2 CARS PER FAMILY UNIT
- •HENCE APPROX 4 TO 6 CARS PER PLOT
- \*SIDEWALK DYSFUNCTIONAL \*AUDIO-VISUAL DISCONNECT



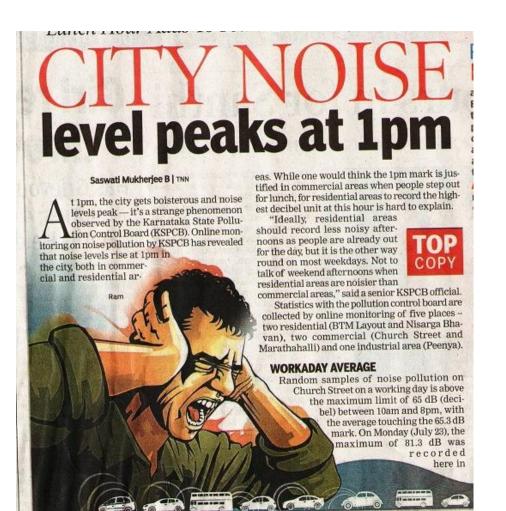
SIDEWALK USURPED= LONELY STREETS
FURTHER REDUCED MAINTENANCE, TERRITORIALITY & ACCESS CONTROL

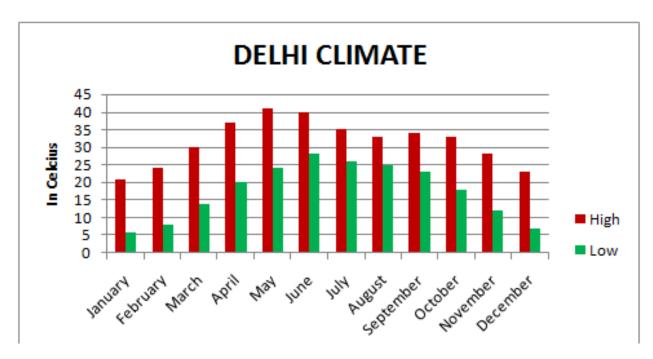


DENSIFICATION = LESS NATURAL COOLING

MORE BUYING POWER= MORE ACS

HIGHER TEMPERATURES= MORE ACS





DENSIFICATION = LESS NATURAL COOLING

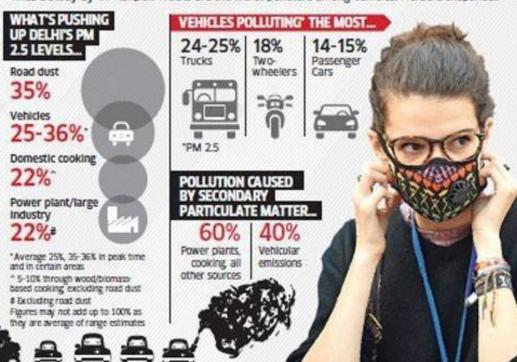
MORE BUYING POWER= MORE ACS

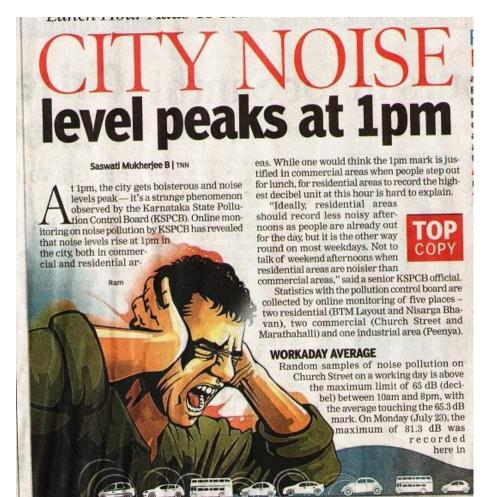
HIGHER TEMPERATURES= MORE ACS

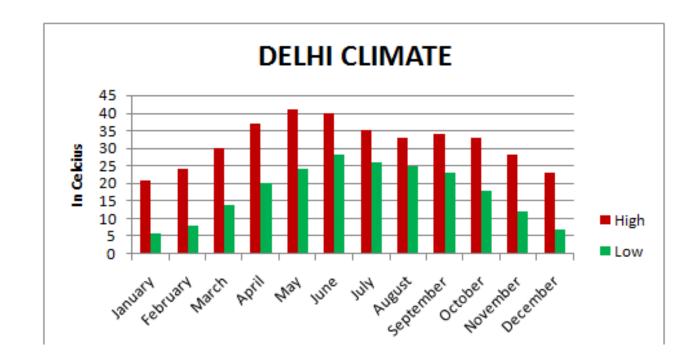
LESS SECONDARY FUNCTIONS = STUNTED SURVEILLANCE LESS VISUAL OR AUDIBLE CONNECTIVITY- LONELY STREETS

## Dust, Trucks, Two-Wheelers Beat Cars as Delhi Air Killers

Road dust is the top contributor to the high level of particulate matter, also called particle pollution or PM. in Delhi followed by vehicular emissions, cooking, and industry or power plants, finds a study by IIT-Kanpur. Trucks are the worst polluters among vehicles. Here's a snapshot...







DENSIFICATION = LESS NATURAL COOLING

MORE BUYING POWER= MORE ACS

HIGHER TEMPERATURES= MORE ACS

LESS SECONDARY FUNCTIONS = STUNTED SURVEILLANCE LESS VISUAL OR AUDIBLE CONNECTIVITY- LONELY STREETS



EMPHASIS ON PRIVACY .... PRIVATE DOMAINS

FORTIFICATIONS AND DISCONNECT

- = CAR PARKING ON STREET
- = MORE NOISE TO SCREEN
- = MORE POLLUTION TO AVOID



EMPHASIS ON PRIVACY .... PRIVATE DOMAINS



EMPHASIS ON PRIVACY .... PRIVATE DOMAINS UNSAFE STREETS= HIGHER CRIME = VICIOUS CYCLE

FORTIFICATIONS AND DISCONNECT









EMPHASIS ON PRIVACY .... PRIVATE DOMAINS UNSAFE STREETS = HIGHER CRIME = VICIOUS CYCLE



#### **INCREASED FORTIFICATION**

\*TO KEEP OUT STRAY ANIMALS LIKE DOGS & CATTLE

\*ALSO TO KEEP OUT NOISE & MAINTAIN PRIVACY



HIGHER & MORE SOLID BOUNDARY WALLS =LONELY STREETS

PESTS & THREATS





# MOSQUITOES= HEALTH ISSUES

MONKEYS = DANGER + GRILLES ON FAÇADE



PESTS & THREATS







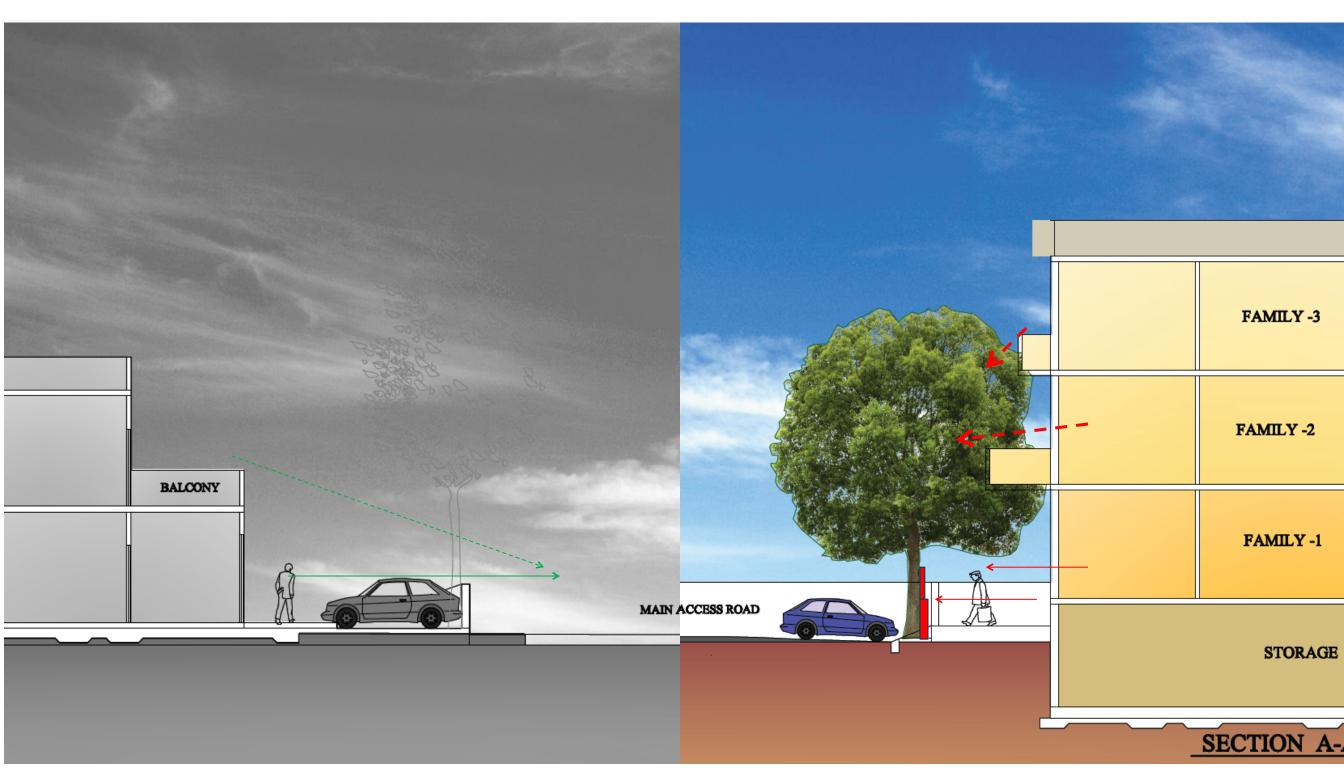
#### REDUCED OUTDOOR INTERACTION

MOSQUITOES= HEALTH ISSUES

MONKEYS = DANGER + GRILLES ON FAÇADE

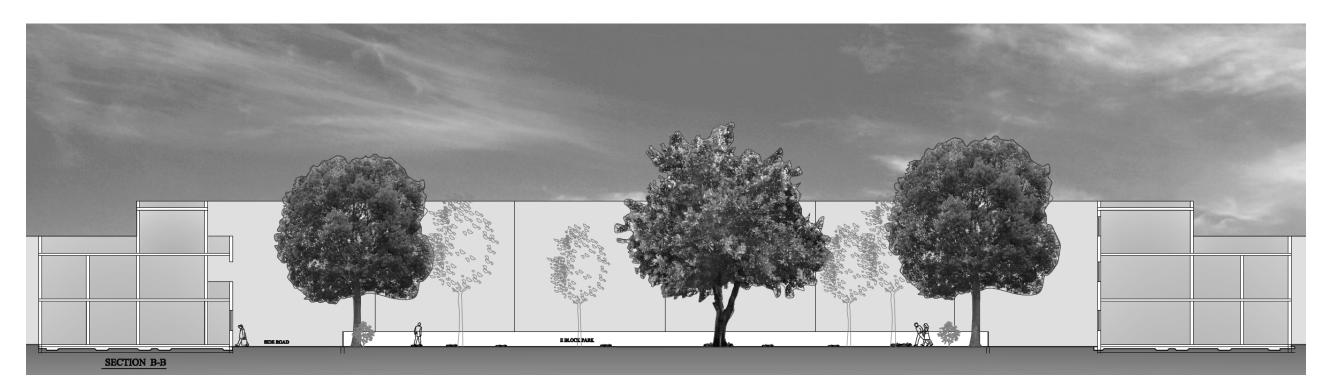


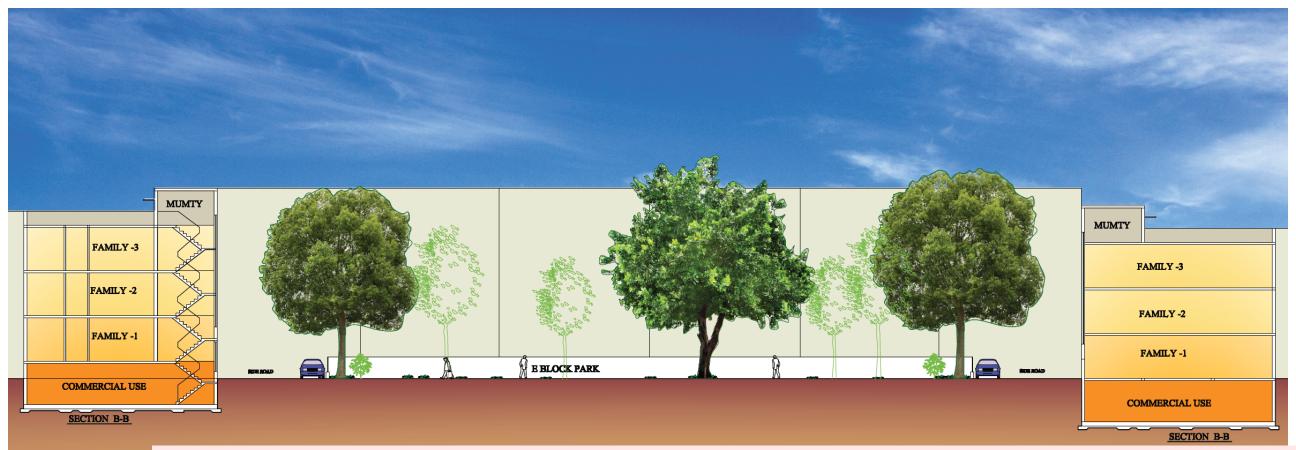
LESS OUTDOOR ACTIVITIES & THEREBY LESS SURVEILLANCE LESS COMMUNITY COHESION, TERRITORIALITY & MAINTENANCE



SECTION OF STREET VS PARKING

**CPTED CHANGE** 





DUE TO LACK OF COMMUNITY FEEL- PARK IS NOT MAINTAINED- UNSAFE & UNCLAIMED NO SURVEILLANCE, LIMITED INFORMAL ACITIVITIES- HIGHER WALLS, ISOLATED EXISTENCE

**CPTED: AT WORK** 

**GOVERNMENT & CITIZEN INTERVENTIONS** 



COUNTER TERROR MEASURES:

-KNOW YOUR NEIGHBOUR

-BE ALERT OF SURROUNDINGS
-REPORT SUSPECT ACTIVITIES

OR PERSONS

**GOVERNMENT & CITIZEN INTERVENTIONS** 



COUNTER TERROR MEASURES

-KNOW YOUR NEIGHBOUR

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OR PERSONS



GOVERNMENT RESPONSE TO TERROR & CRIME CITIZEN INVOLVEMENT & BREAKDOWN OF ADMIN TO NEIGHBOURHOOD LEVEL

**GOVERNMENT & CITIZEN INTERVENTIONS** 



COUNTER TERROR MEASURES:

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**GOVERNMENT & CITIZEN INTERVENTIONS** 



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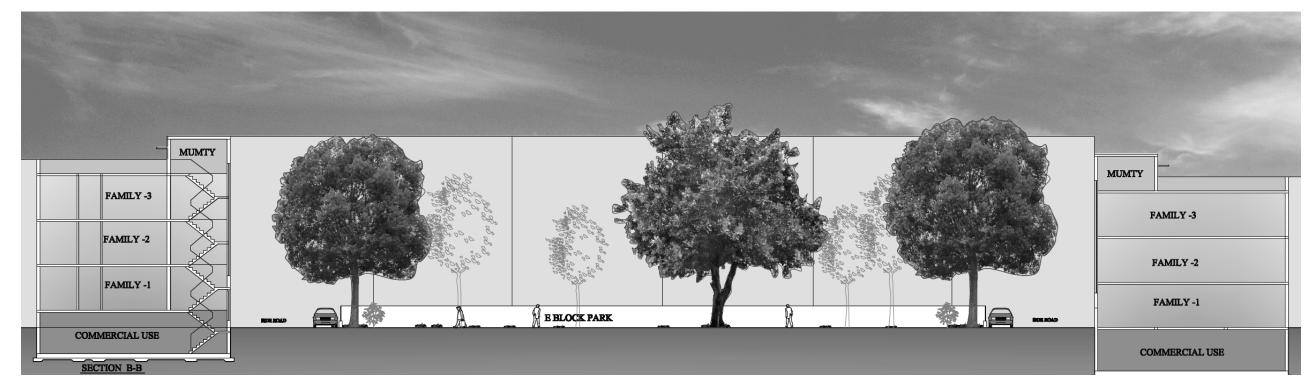
OR PERSONS

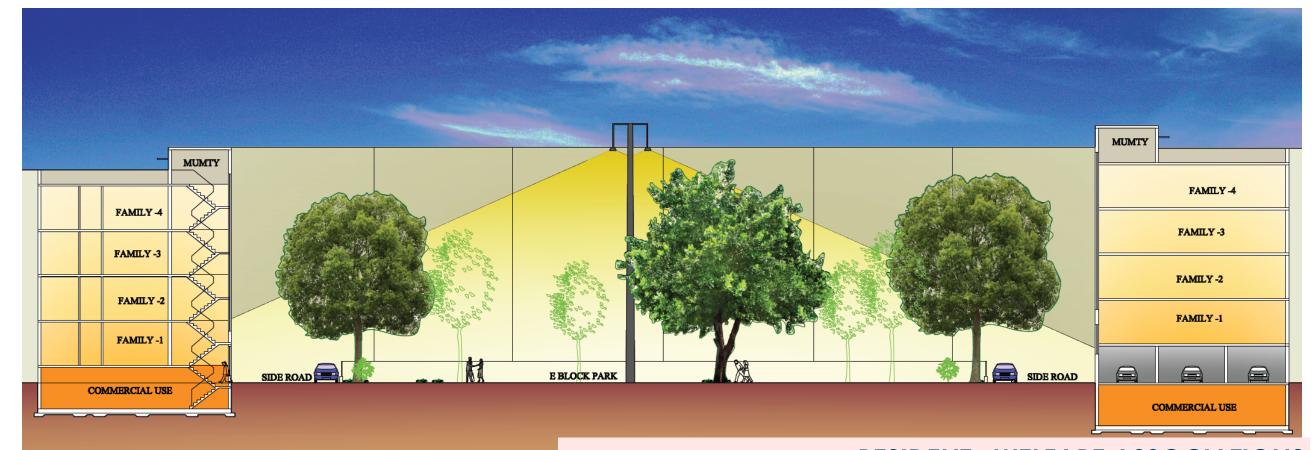






- •MAINTENANCE & USE BY THE RESIDENTS
- •ELECTIONS & MEETINGS-PEOPLE INTERACT & SOCIALIZE
- •BUDGETS TO USE DEMOCRATICALLY- LIGHTS ADDED, BENCHES, WALKING TRACKS ETC.





THE HIGH MAST LIGHT- SECURES THE ENTIRE MOHALLA ALLOWING USE OF PARK EVEN AT 1 IN THE NIGHT

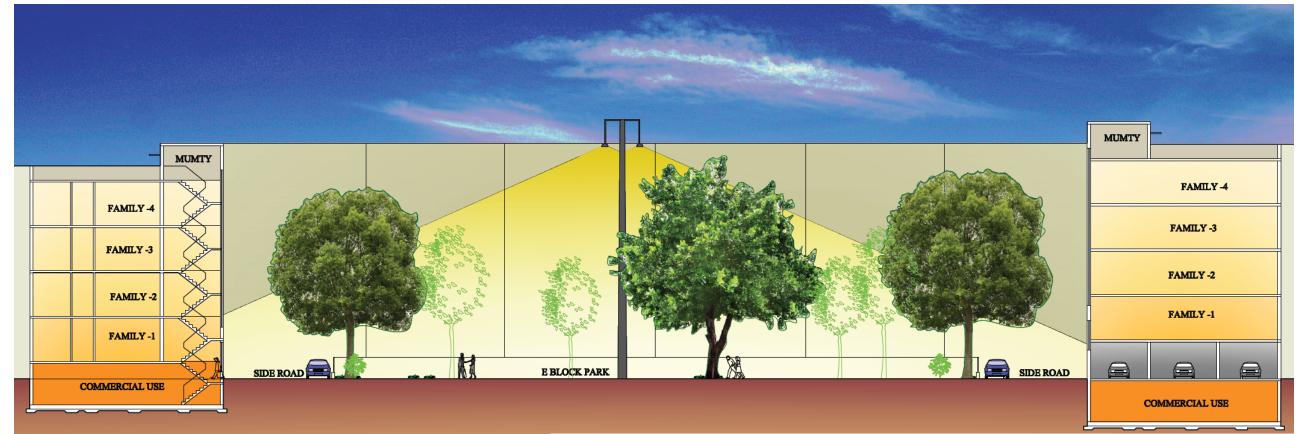
**RESIDENT WELFARE ASSOCIATIONS**- FOR THE PEOPLE, BY THE PEOPLE

#### **CPTED CORRECTIONS: MY STREET NOW**

**COMMUNITY EFFORTS** 



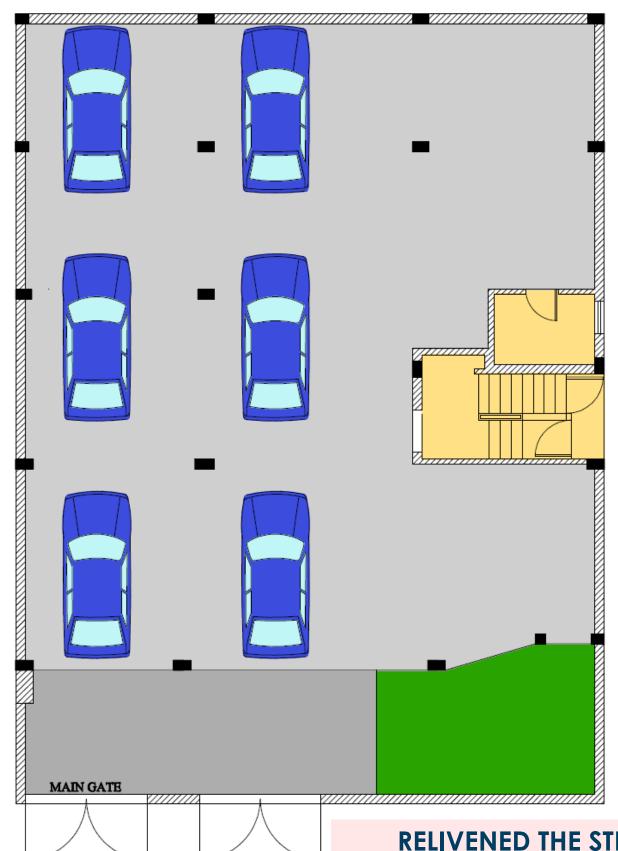




THE HIGH MAST LIGHT- SECURES THE ENTIRE MOHALLA ALLOWING USE OF PARK EVEN AT 1 IN THE NIGHT

**RESIDENT WELFARE ASSOCIATIONS**- FOR THE PEOPLE, BY THE PEOPLE

**REVISED BUILDING REGULATIONS** 





**MY STREET: NOW** 

**REAL ESTATE BOOM** 



NDA BASED INTERACTION

RECAPTURES SEMI PUBLIC

RE CENTRAL ACTIVITES

MORE CASUAL SURVEILLANCE

CLES TUCKED INSIDE- RESCUES THE SIDE WALK
PRIVATE – RAISED ABOVE THE BOUNDARY WALL

BETTER USED & VIEWS

ES REPLACE BOUNDARY WALLS :

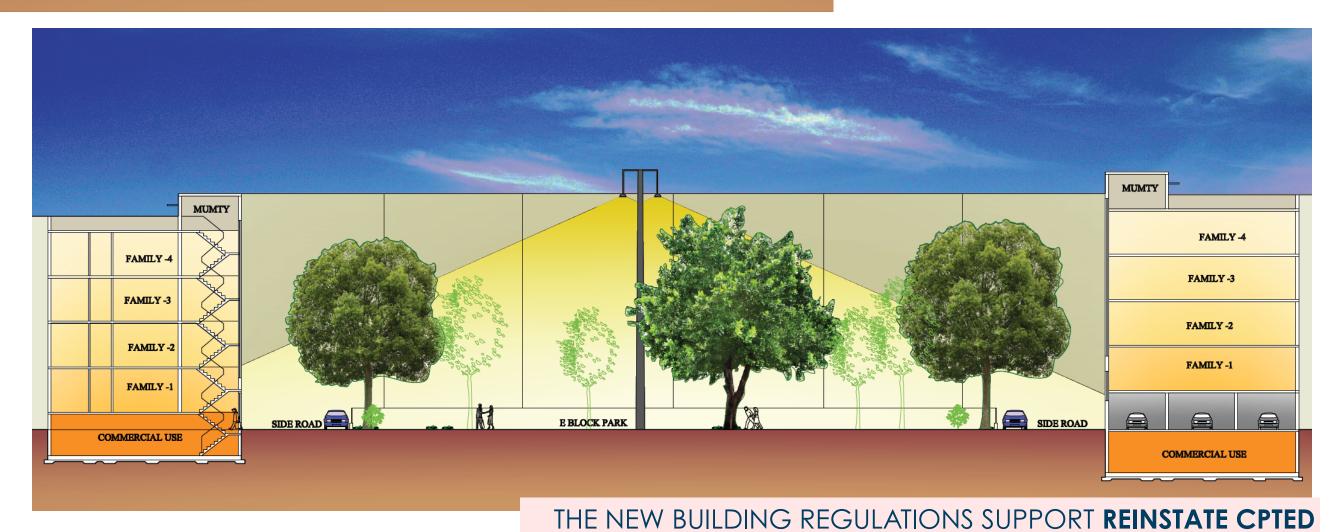
SEMI PRIVATE

ments for professional use:

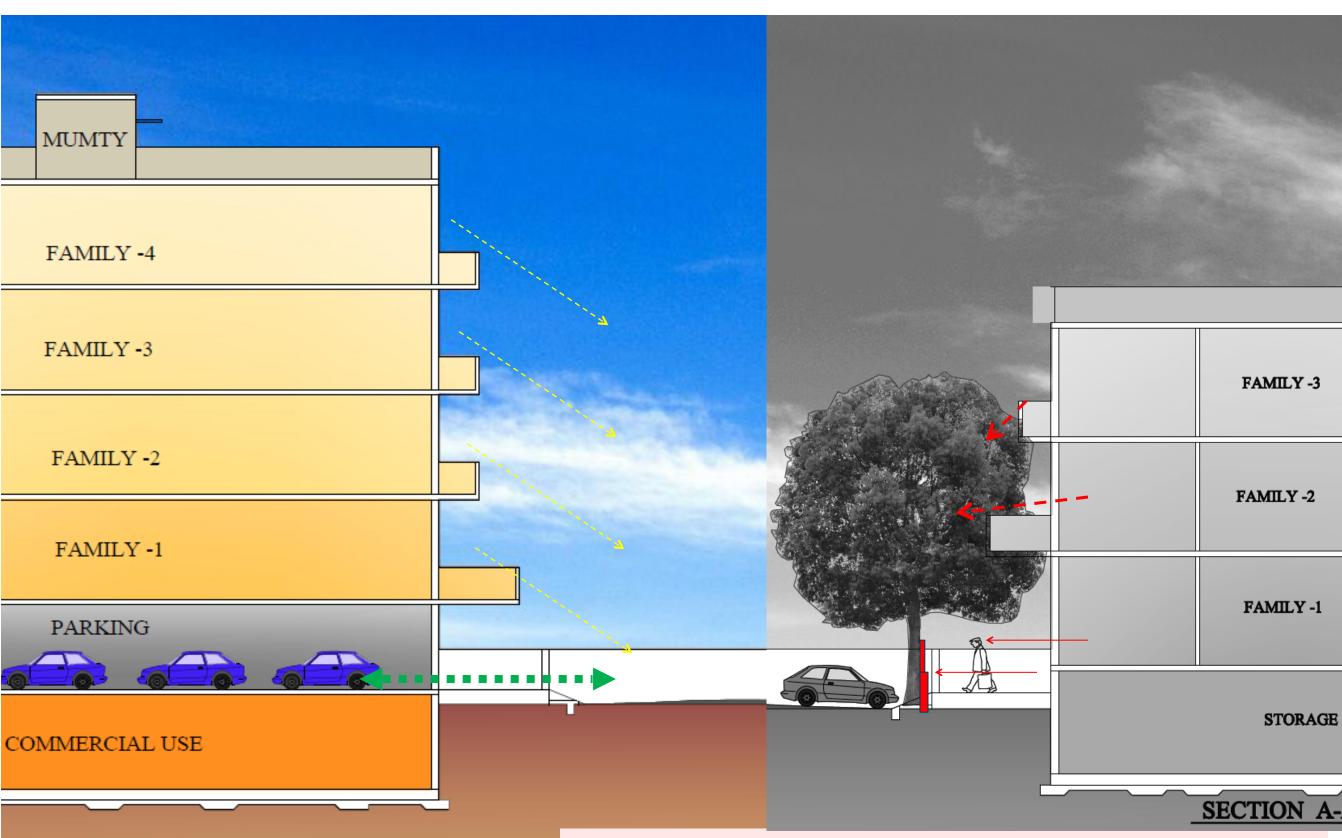
**SECONDARY FUNCTION** 

MAIN ROADS- GF COMMERCIAL:

MORE SURVEILLANCE



IN A **NEW AVTAR** 



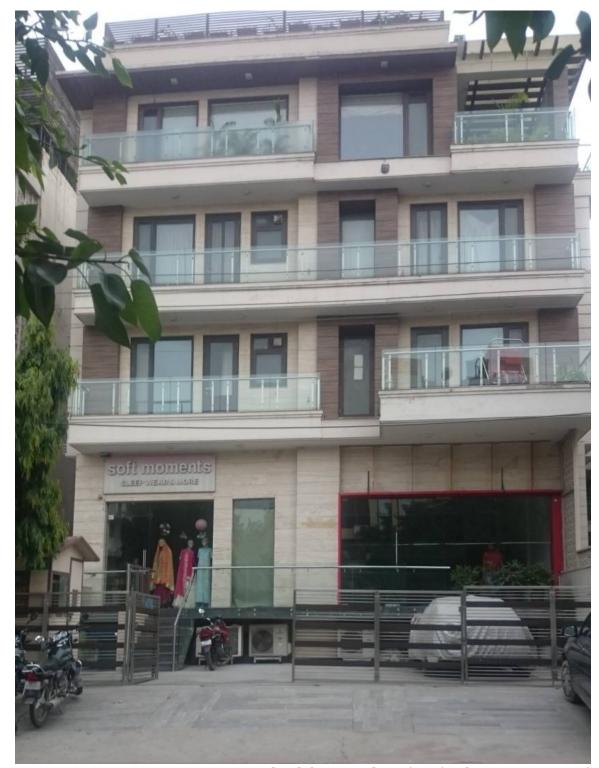
SECTION OF STREET VS PARKING

SIDEWALK VACATED=SEMI PUBLIC & SEMI PVT IN ACTION SURVEILLANCE ALIVE AND ACTIVE AGAIN >>>

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STREET FREED OF PARKING: STILTS= SEMI PUBLIC GF BALCONY MORE INTERACTIVE WITH STREETS LARGER WINDOWS/GLAZING= TOUGHENED GLASS NO GRILLES REQD GLASS & STEEL RAILINGS= MORE TRANSPARENCE



GF COMMERCIAL SANS BOUNDARY WALLS

# MODERN MATERIALS ENHANCE CPTED MORE PEDESTRIAN AND OPENNESS

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1970S 2000S

IN ADDITION TO ARCHITECTURAL FACTORS THERE HAVE BEEN A LOT OF EFFORTS ON THE SOCIAL,
SECURITY INFRASTRUCTURE
LEGAL, & JUDICIAL LEVELS

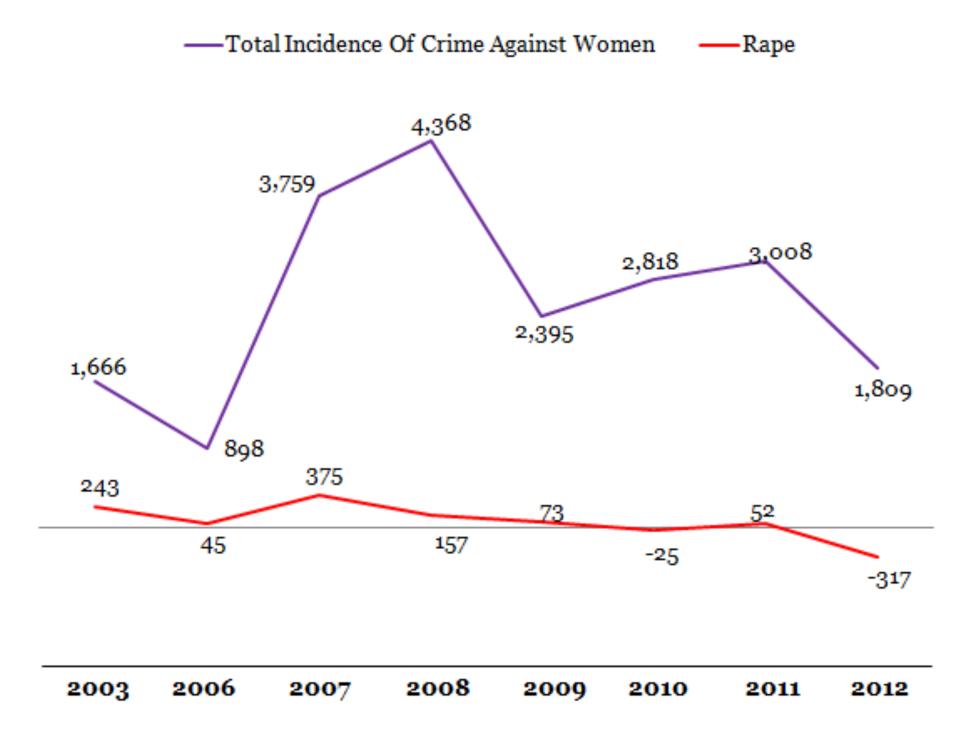
## 'CRIME CAPITAL' DELHI DOESN'T LEAD IN OVERALL CRIME

Only Nagaland and Uttarakhand have IPC crime rates lower than UP

STATE	<b>IPC CRIME</b>	<b>SLL CRIME</b>	<b>OVERALL CRIME</b>
DELHI	916.8	41.2	958
KERALA	723.2	1,115	1,838
MP	348.3	116.8	465.5
ASSAM	321.8	12.0	333.8
HARYANA	310.4	174.6	495
UP	112.1	1,181.2	1,293.1
<b>ALL INDIA</b>	234.2	347.6	581.8

<sup>\*</sup>Numbers are for crime rates, i.e. number of crimes per 100,000 population. Source: Crime in India, 2015, published by National Crime Records Bureau, Ministry of Home Affairs

## Yearly Difference In Crimes Against Women, 2003 - 2012



NOTE: 2002, 2004 & 2005 figures not available Source: National Crime Records Bureau