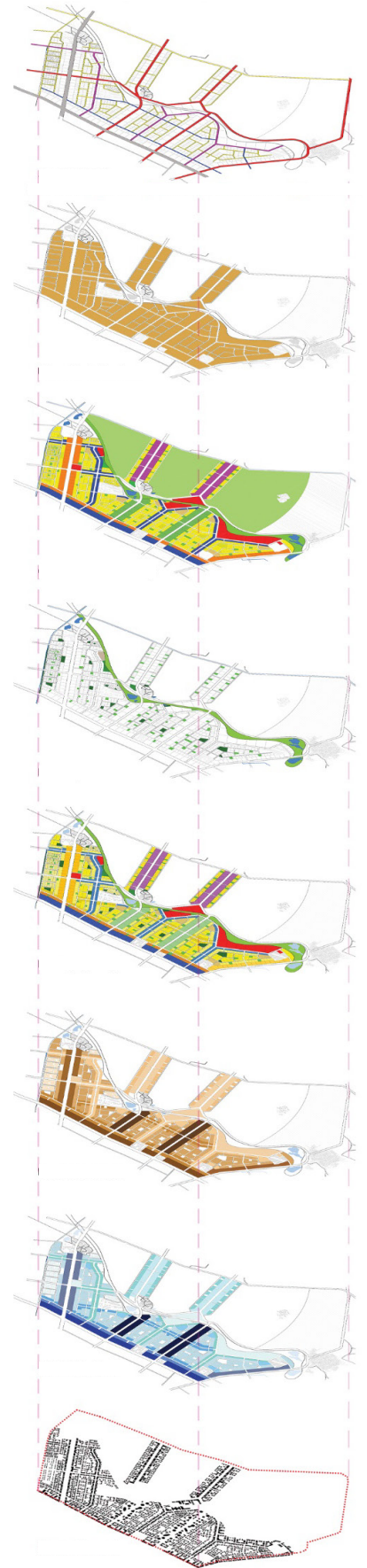


# Manual for Preparation of Local Area Plans



**GUJARAT REAL ESTATE REGULATORY AUTHORITY**  
GOVERNMENT OF GUJARAT

**CRDF** CEPT RESEARCH AND DEVELOPMENT FOUNDATION  
**CUPP** CENTER FOR URBAN PLANNING AND POLICY

*Page Intentionally Left Blank*

# Manual for Preparation of Local Area Plans

February 2022



**GUJARAT REAL ESTATE REGULATORY AUTHORITY**  
GOVERNMENT OF GUJARAT

**CRDF** CEPT RESEARCH  
AND DEVELOPMENT  
FOUNDATION  
**CUPP** CENTER FOR  
URBAN PLANNING  
AND POLICY

## Preface

In line with the global trends, the Urban population of India is likely to go up to 70 crores by 2050. It will be double that of the current urban population and 2.5 times the present population of the USA. Experts estimate a need for 500 cities to accommodate this humungous growth in urban population. Recent data from the southern and western States shows that there is a clear linkage between urbanization, population growth and economic prosperity. These States have a high level of urbanization ranging from 33.4% to 48.4% and considerably higher per capita GDP ranging from (Rs.1.86 to 2.05 lacs) as compared to the national average of 1.32 lacs, indicating relative prosperity. The Gross Enrolment Ratio (GER) in higher education in the range of 20.1 to 48.6 and lower Total Fertility Rate (TFR) as well as better care of every child in these states reflect a superior quality of life. The experience of south Korea is also instructive. Its urban population rose from 28.8% in 1966 to 85.7% in 1999, while its economy went from low income to upper middle-income status during this phase. Cities have been centres of growth, innovation and creativity. GDP of New York as well as that of Tokyo is at par, with that of India!

If India has to achieve the Prime Minister's vision of becoming a 5 trillion-dollar economy by 2024, its cities and towns must play a crucial role of becoming the engines of growth and development. The state and cities must facilitate the demands of the future through innovations in spatial planning regime, & facilitating greater efficacy in achieving the vision for Indian cities in the 21st century.

The state of Gujarat, as one of the front runners contributing greatly to this economic growth of the country, has already risen to achieve this vision and is committed to attracting investments. The Vibrant Gujarat Global Summits have paved the way for this. The Urban Development and Urban Housing Departments (UD & UHD) has been playing a key role in facilitating this growth and development, and working closely with other departments and authorities including Gujarat Real Estate Regulatory Authority (Guj-RERA) to achieve the vision.

Gujarat is known for its planning and urban development, especially its much appreciated two-tier, DP-TP planning mechanism. While the Development Plans (DP), as a macro planning tool provides a broader vision for the Development Authority area, the T P Scheme mechanism, as a micro-planning tool for implementing DP proposals has been widely appreciated nationally. However, as the cities have continued to grow under the planning frameworks for over a century by developing newer Greenfield areas, the older, inner city areas and developed suburbs were left to their own fate as they continued to become congested and deteriorate over time. Therefore, there is a continued need felt for improving and revitalizing these inner city areas through careful examining and planning. Over the years, various Development Authorities in the state have envisioned such urban regeneration transformation and conservation of inner city areas through zoning and regulatory tools while preparing DP. Additionally, the central government through the Ministry of Housing and Urban Affairs (MoHUA) has continuously supported this vision by undertaking various Missions, Policies as well as extending Fiscal support under the AMRUT Mission, Area Based Development (ABD) under the Smart Cities Mission, National Transit Oriented Development (TOD) policy, National Metro Rail Policy, 2017 etc.

The Government of Gujarat realized the need for an effective, sustainable and implementable micro-planning mechanism to materialize such vision on ground and amended the Gujarat Town Planning and Urban Development Act (GTPUDA) 1976 in 2014 to include "Special provisions for Local Area Plans" under section 76-A. The addition of LAP as a statutory urban planning tool clearly reflects the progressive nature of the state where urban planning mechanisms have continuously evolved by virtue of such amendments ever since the inception of its first planning Act in 1915. Various Development Authorities have also welcomed the amendments by initiating preparation of several LAPs. The department is also strengthening its human resources by recruiting new urban planners and officers. Simultaneously, Gujarat- RERA has undertaken preparation of "Manual for Preparation of Local Area Plans" to facilitate this noble mission. This manual has been conceptualized with help of highly experienced planners and practitioners.

The core team instrumental in preparing the manual includes **Shri V. K. Phatak** (Former Dean, Faculty of Planning, CEPT University, and Former Principal Chief, Town and Country Planning Division, MMRDA), **Shri Jignesh Mehta** (Urban Planner and Program Chair, Master of Urban Planning, CEPT University), **Shri Utkarsh Patel** (Urban

Planner & Domain Expert) and other experts from CEPT university. **Shri Vatsal Patel** (Technical officer, Guj-RERA, Former Chief City Planner, AMC) ably coordinated the whole effort. The successive drafts were reviewed by senior experts **Shri P.L. Sharma** (former Chief Town Planner, Govt of Gujarat), **Shri P. K. Ghosh**, IAS (R) (Former Municipal Commissioner, AMC), **Shri N. K. Patel** (Urban Planning and Development Domain Expert), **Shri M. M. Bhaumik** (Former Senior Town Planner), **Shri U. S. Mehta** and other senior planners and professionals involved in planning and implementation of Development Plans. The final draft was reviewed by **Shri R. Shrinivas** (Town and Country Planner, TCPO, MoHUA, Govt of India), who provided valuable inputs, which have been duly incorporated.

The manual has become even more relevant in light of the Union Budget 2022-23, which focuses on bringing in the reforms in urban sector policies, capacity building, planning and implementation, where Development Plans become crucial to guide the growth through preparation of TP Schemes and Local Area Plans. We are delighted that TCPO has circulated advance copies of the manual to all states, as a base document for providing guidance and support for formulation of LAPs and TP schemes under the scheme of Amrut.

We do hope that the manual will be found useful by the states in preparing effective implementable Local Area Plans (LAP) and in the process provide guidance to the young new generation planners.

We welcome any suggestions to further refine the manual.

**Dr. Amarjit Singh IAS (R)**

Chairman

Gujarat Real Estate Regulatory Authority

**Letter from Town and Country Planning Organization, Ministry of Housing and Urban Affairs,  
Government of India**



**Town and Country Planning Organization  
Government of India  
Ministry of Housing and Urban Affairs**

E-Block, Vikas Bhawan , Indraprastha Estate  
New Delhi – 110 002

Telefax: 011 – 23370837

Email: srinimetro@gmail.com

Dated: 24<sup>th</sup> January , 2022

**F.No. 19-1/2016/TCPO/MUT (203)**

**To all the State/UT Chief Town Planners/Director**  
Town and Country Planning Department

**Subject: Manuals on Formulation on Local Area Plan Plans and Town Planning Scheme  
prepared by Gujarat RERA**

**Sir/Madam**

As you are aware that this Ministry has been administering the sub scheme of Formulation of Local Area Plans and Town Planning Scheme in 25 cities and the same shall continue under the AMRUT 2.0 and more cities will be covered depending on the requests of the State Government and Union Territories. In this regard, a DO of even number dated 17<sup>th</sup> January has already been sent.

It is informed that Gujarat Real Estate Regulatory Authority (GRERA) has brought out two important documents viz., Manuals on Formulation on Local Area Plan Plans and Town Planning Scheme. The documents provide step- by- step methodology to prepare both the plans and are ideal guide to Town Planners working in State Town and Country Planning Departments/Urban Development Authorities/Urban Local Bodies. The documents can be downloaded from the following link:

<https://gujrera.gujarat.gov.in/resources/staticpage/attachments/Manual for Preparation of Local Area Plans.pdf>

<https://gujrera.gujarat.gov.in/resources/staticpage/attachments/Manual for Preparation of Town Planning Schemes.pdf>

This may kindly be circulated to all the district offices of State /UT Town and Country Planning Department.

Yours faithfully

**(R. Srinivas)**

Town and Country Planner

**Note:**

1. This manual is NOT a Statutory document, and in no form should it be understood or construed as one. The main purpose of this manual is only to provide additional guidance to support, facilitate and improve the preparation of Local Area Plan in the state of Gujarat and to make the process more efficient.
2. This manual is based on multiple discussions, suggestions and recommendations identified during various meetings with various experts from relevant departments in the State Government and practitioners in the field identified by Guj-RERA.
3. It is important to note that this manual must be used in conjunction with the Gujarat Town Planning and Urban Development Act 1976 and the rules published by the Government, and not as standalone document.
4. While this manual has been based on the GTPUD Act, 1976, the other states interested in preparation and implementation of Local Area Plans (LAP) should customize their planning acts by adding/ modifying the relevant sections according to their state specific needs and requirements.
5. Beyond the current conventional practice this Manual also makes recommendations to carry out some improvements either in the process or in the institutional framework by the authority and/or the government (without requiring amendments in the act). All such recommended improvements are indicated with **BROWN** colored text in this manual.

*Page Intentionally Left Blank*



## Acknowledgments:

The following individuals graciously contributed to the reviews, discussions and decisions taken during the process of preparing the manuals.

### Team of Experts, Reviewers and Contributors

- Dr. Amarjit Singh, IAS, Chairman, Guj-RERA
- Shri P. L. Sharma, Former Chief Town Planner, TPVD, Govt. of Gujarat
- Shri P. K. Datta, Officer on Special Duty (OSD), UD & UHD, Govt. of Gujarat
- Shri R. Srinivas, Town and Country Planner, TCPO, MoHUA, Govt. of India
- Shri K. D. Sagathiya, Senior Town Planner (Legal), TPVD, Govt. of Gujarat
- Shri P. K. Ghosh, IAS(R), Former Municipal Commissioner, Expert Advisor, Urban Planning
- Shri V. K. Phatak, Project Mentor, Domain Expert, CUPP, CRDF, CEPT University
- Shri Utpal Sharma, Expert Advisor, Urban Planning
- Shri P.J. Patel, Member-1, Guj-RERA
- Shri D.P. Joshi Member-2, Guj-RERA
- Dr. Vatsal Patel, Technical Officer, Guj-RERA
- Shri Rajesh Rawal, Senior Town Planner, AUDA
- Shri Rajesh Patel, T.D.O., Ahmedabad Municipal Corporation
- Shri Bihag Angreji, Asst. Technical Officer, Guj-RERA
- Shri Vaishvik Brahmhatt, Asst. Technical Officer, Guj-RERA
- Shri M.M. Bhaumik, Expert Advisor, Urban Planning
- Shri U.S. Mehta, Expert Advisor, Urban Planning
- Shri N.K. Patel, Expert Advisor, Urban Planning
- Shri B. H. Rupani, Expert Advisor, Senior Town Planner (Retd.)
- Shri Deepa Dave, Expert Advisor, Town Planner, AMC

### Key Contributors

- Shri V. K. Phatak, Project Mentor, Domain Expert, CUPP, CRDF, CEPT University
- Shri Jignesh Mehta, Project Leader, Domain Expert, CUPP, CRDF, CEPT University
- Shri Utkarsh Patel, Domain Expert, CUPP, CRDF, CEPT University
- Dr. Rutul Joshi, Domain Expert, CEPT University
- Shri Amit Gotecha, Domain Expert, CUPP, CRDF, CEPT University
- Shri Rohit Raina, Urban Planner, CUPP, CRDF, CEPT University
- Shri Shashank Trivedi, Urban Designer, CUPP, CRDF, CEPT University

*Page Intentionally Left Blank*

# Contents

<b>Chapter 1: Introduction . . . . .</b>	<b>.01</b>
1.1 Why this manual? . . . . .	02
1.2 What does it provide? . . . . .	03
1.3 How is the Manual Structured? . . . . .	03
<b>Chapter 2: Purpose and Background of Local Area Plan. . . . .</b>	<b>05</b>
2.1 Background . . . . .	06
2.1.1 What is Local Area Plan? . . . . .	06
2.1.2 Why LAP mechanism? . . . . .	07
2.1.3 Understanding History and Background of LAP Mechanism in India and abroad . . . . .	08
2.2 Main Provisions in the GTPUDA, 1976 for preparation of LAP. . . . .	13
2.3 Current LAP Mechanism . . . . .	14
2.4 Recommended Improvements in LAP Mechanism . . . . .	17
2.4.1 Recommended improvements in LAP Process . . . . .	17
<b>Chapter 3: Components of Improved LAP. . . . .</b>	<b>.23</b>
3.1 LAP Report . . . . .	24
3.2 LAP Maps . . . . .	26
3.3 Forms. . . . .	27
3.3.1 Owner's Contribution Form . . . . .	27
3.3.2 Cost Estimation Form . . . . .	28
3.3.3 Revenue Generation Estimation Form . . . . .	28
3.4 Development Regulations for LAP . . . . .	29
 <b>STAGE 1: PUBLICATION OF LAP BOUNDARY</b>	
<b>Chapter 4: Identification and delineation of area for Local Area Plan . . . . .</b>	<b>.31</b>
4.1 Identifying purpose of LAP. . . . .	32
4.2 When & Where to locate LAP . . . . .	33
4.3 Considerations for delineating LAP Boundaries . . . . .	33
<b>Chapter 5: Base Map Preparation and Publication of LAP Boundary. . . . .</b>	<b>.35</b>
5.1 Physical Features Survey . . . . .	36
5.2 Preparation of Base Map . . . . .	38
5.2.1 Reconciliation (Melavni). . . . .	38
5.2.2 Review of Draft Base Map . . . . .	38
5.3 Finalizing the Base Map . . . . .	39
5.3.1 Publication of Draft Base Map and Receiving Objections and Suggestions . . . . .	39
5.3.2 Preparation of Final Base Map . . . . .	39
5.4 Publication of LAP Boundary. . . . .	39

## STAGE 2: PREPARATION OF DRAFT LAP

<b>Chapter 6: Existing Situation Assessment</b> . . . . .	<b>41</b>
6.1 Analysis of Existing Land Use . . . . .	42
6.2 Analysis of Land ownership . . . . .	42
6.2.1 Land records/ Property owners' surveys . . . . .	42
6.3 Analysis of Building use and Building condition . . . . .	43
6.4 Analysis of Transport Network . . . . .	43
6.5 Analysis of Infrastructure (physical & social) . . . . .	44
6.6 Analysis of Topography, Environmental Features . . . . .	45
6.7 Analysis of informal activities . . . . .	46
6.8 Property Rates – Jantri & Market . . . . .	46
<b>Chapter 7: Planning and Design of LAP</b> . . . . .	<b>47</b>
7.1 Stakeholder Consultation for Preparing Vision and Concept of LAP . . . . .	48
7.2 Identifying Purpose and Vision for LAP . . . . .	48
7.3 Identifying Key Planning and Design Principles for LAP . . . . .	50
7.4 Preparation of Schematic Layout . . . . .	51
7.5 Envisioning Areas with different Urban Character and Built Form . . . . .	53
7.6 Guidelines for Street Network Planning and Design . . . . .	54
7.6.1 Key Considerations . . . . .	54
7.6.2 Guidelines to Improve the Street Network . . . . .	57
7.6.3 Guidelines to integrate street design . . . . .	60
7.7 Guidelines for Integrating Informal Activities and Settlements. . . . .	63
7.8 Guidelines for Preparing Parking Management . . . . .	65
7.9 Guidelines for Providing Physical Infrastructure. . . . .	67
7.10 Guidelines for Open Spaces, Network of Green Spaces and Water bodies . . . . .	69
7.11 Guidelines for Locating Social Amenities . . . . .	71
<b>Chapter 8: Regulations and Guidelines for LAP</b> . . . . .	<b>73</b>
8.1 Regulations . . . . .	74
8.1.1 Background. . . . .	74
8.1.2 Conventional Approach vs Form-Based Approach . . . . .	74
8.2 Components of Form Based Regulations . . . . .	75
8.2.1 Form Based Zoning Plan (Map) . . . . .	75
8.2.2 Form Based Regulations . . . . .	76
8.2.3 Types of regulations. . . . .	76
8.3 Guidelines for development of streets and public areas. . . . .	79
<b>Chapter 9: Compensation, Contribution, Cost and Revenue for Implementation of LAP.</b> . . . . .	<b>81</b>
9.1 Land Contribution and FSI Compensation . . . . .	82
9.2 Cost of Preparation & Implementation of LAP Works. . . . .	84
9.2.1 Cost of Infrastructure Works for LAP . . . . .	84
9.2.2 Cost of Preparation of LAP . . . . .	86
9.3 Revenue Generation & Finance . . . . .	86
9.3.1 Revenue Generation . . . . .	86
9.3.2 Finance Management . . . . .	87

## STAGE 3: PUBLICATION and sanction of lap

<b>Chapter 10: Publication, Modification and Submission of Draft LAP. . . . .</b>	<b>89</b>
10.1 Meeting of Persons affected by LAP & Receiving Suggestions and Objections. . . . .	90
10.2 Considering Objections and Suggestions and Improving the LAP . . . . .	90
10.3 Publishing of LAP in the Official Gazette and Inviting Objections and Suggestions . . . . .	91
10.4 Considering Objections and Suggestions, Modifications and Submitting the LAP to State Government . . . . .	91
10.5 Sanctioning of LAP . . . . .	92
<b>Chapter 11: Recommended Improvements in Institutional Framework, Roles and Responsibilities. . . . .</b>	<b>93</b>
11.1 Appointment of Cadre Post of DILR for Updating Land Records for Base Map . . . . .	94
11.2 Appointment of Advisors or Domain Experts during Preparation of Draft LAP . . . . .	95
11.3 Appointment of Expert Review Committee (ERC) . . . . .	96
11.4 Appointment of Local Area Plan Coordinator (LAP Coordinator) . . . . .	96
<b>Chapter 12: Implementation of LAP and Cash Flow Management . . . . .</b>	<b>101</b>
12.1 Budgetary Provision for Development Works . . . . .	102
12.2 What should be Implemented When? . . . . .	102
12.3 Who should Implement What? . . . . .	103
 <b>APPENDIX</b>	
<b>Appendix 1: Data Collection from Various Departments . . . . .</b>	<b>105</b>
<b>Appendix 2: Guidance for Appointment of Consultants for Survey and other Assistance. . . . .</b>	<b>109</b>
<b>Appendix 3: Guidance for Survey Methods . . . . .</b>	<b>111</b>
3.1 Total Station Survey. . . . .	112
3.2 Drone Survey . . . . .	114
<b>Appendix 4: Case Studies of Various Local Area Plan Mechanisms . . . . .</b>	<b>117</b>
4.1 Ireland. . . . .	118
4.1 Bhutan . . . . .	122
4.3 Maharashtra. . . . .	125
4.3.1 Development of Bandra Kurla Complex . . . . .	126
4.3.2 Plans for Comprehensive Development in Maharashtra . . . . .	129
4.4 Delhi . . . . .	131
4.5 Madhya Pradesh . . . . .	134
4.6 Kerala. . . . .	136
<b>Appendix 5: Contents of Different types of LAP Reports . . . . .</b>	<b>137</b>
5.1 LAP for Transit Oriented Zones . . . . .	138
5.2 LAP for Heritage Precincts. . . . .	139
<b>Appendix 6: Recommended Guidelines for Preparation and Implementation of LAP. . . . .</b>	<b>141</b>
6.1 Background . . . . .	142
6.2 Recommended Guidelines for Enabling LAP Mechanism through Statutory Provisions . . . . .	143

## List of Flow Charts

Flow Chart 1: Existing Local Area Plan Process. . . . .	15
Flow Chart 2: Recommended Local Area Plan Process . . . . .	99

## List of Figures

Figure 3_1: LAP Report . . . . .	24
Figure 3_2: Base Map (existing situation survey map). . . . .	26
Figure 3_3: LAP Map_Revised Street Network and ROWs. . . . .	26
Figure 3_4: Urban Design Regulations Map_Building Unit. . . . .	26
Figure 3_5: Urban Design Regulations Map_Builtform Features . . . . .	26
Figure 3_6: Owner's Contribution Form for LAP (TOD LAP_BRDS). . . . .	27
Figure 3_7: Draft Regulations for CBD-LAP. . . . .	29
Figure 4_1: LAP zones along TOD Corridors of Ahmedabad City . . . . .	33
Figure 4_2: Shivranjani TOD-LAP . . . . .	33
Figure 4_3: WADAJ TOD - LAP & Slum Redevelopment . . . . .	33
Figure 5_1: Existing Situation Analysis . . . . .	36
Figure 5_2: Process of reconciliation (Melavni) . . . . .	38
Figure 6_1: Existing Land Use Map. . . . .	42
Figure 6_2: Existing Land Ownership Map . . . . .	42
Figure 6_3: Existing Building Use Map. . . . .	43
Figure 6_4: Existing Building Condition Map . . . . .	43
Figure 6_5: Existing Transport Network Map (AMTS,BRTS,MRTS) . . . . .	43
Figure 6_6: Existing Social Amenities (Parks and Garden) . . . . .	44
Figure 6_7: Existing Social Amenities (Public Purpose Plots) . . . . .	44
Figure 6_8: Existing Informal Activities Map . . . . .	46
Figure 7_1: Stakeholder's Consultation on proposed LAP Layout. . . . .	48
Figure 7_2: Stakeholder's Consultation on LAP. . . . .	48
Figure 7_3: 3d Visualisation of CBD's Vision . . . . .	48
Figure 7_4: Identifying CBD as Special Provision/Project in DP . . . . .	49
Figure 7_5: Urban Form Visualisation for TOD Corridor. . . . .	49
Figure 7_6: Schematic Layout of Proposed LAP . . . . .	51
Figure 7_9: Example of Envisioned Builtform for the LAP area . . . . .	53
Figure 7_7: Example of Envisioned Urban Character for the LAP area. . . . .	53
Figure 7_8: Example of Envisioned Builtform & Public Spaces for the LAP area . . . . .	53
Figure 7_10 : Examples of Walkable Urban Block and Street Network . . . . .	55
Figure 7_11: Comparative Diagram for Different Block sizes corresponding to different uses . . . . .	56
Figure 7_12: Examples of Multimodal Street . . . . .	57
Figure 7_13: Steps(1-6) to improve the walkability . . . . .	59
Figure 7_15: Street priority pyramid. . . . .	60
Figure 7_16: A Sample of Complete street design . . . . .	60
Figure 7_17: A typical 9 mt. Pedestrian ROW Section . . . . .	60
Figure 7_18: A typical 12 mt. ROW Section . . . . .	60
Figure 7_19: A Typical 18 mts. ROW Section . . . . .	61
Figure 7_20: A Typical 24 mts. ROW Section . . . . .	61
Figure 7_21: A typical 30 mts. ROW Section . . . . .	61
Figure 7_22(a): Proposed Road Intersection must be between 90°-60° angle . . . . .	62
Figure 7_22(b): Road intersection of less than 60° angle must be avoided. . . . .	62
Figure 7_22(c): Minimum Distance between two intersections . . . . .	62
Figure 7_22(d): Corner Plot Radius . . . . .	62
Figure 7_23: Incorporating Informal vending in street design. . . . .	63
Figure 7_24: Linear Informal vending zones along the street are a better option Example Market at Law garden, Ahmedabad. . . . .	63
Figure 7_25: Concentrated Informal vending on dedicated plots are generally not successful in the long-run. . . . .	63
Figure 7_26: Area Based Development for redevelopment of Slums in Ahmedabad . . . . .	64
Figure 7_27: On Street Parking without system . . . . .	65
Figure 7_28: Paid Parking along major commercial street, Ahmedabad . . . . .	66
Figure 7_29: Parking Management Zones- Key Plan . . . . .	66
Figure 7_30: Parking Management Zones 5- Strategy Map . . . . .	66
Figure 7_31: Provision of Underground Utilities based on the street type and context . . . . .	67

Figure 7_32: Networking storm water drains to rain water recharge wells in Vastrapur lake- a case of good practice.	68
Figure 7_33: Present condition- no dedicated space provided for waste collection at neighborhood level . . . . .	68
Figure 7_34: Proposed dedicated waste collection area allocated at neighborhood level . . . . .	68
Figure 7_35: Continuity of Natural drains and streams . . . . .	69
Figure 7_36: Incorporating Sensitive Environment Features in LAP . . . . .	69
Figure 7_37: Creating a network of open spaces (Green) and Natural (Blue) in the LAP . . . . .	70
Figure 7_38: Different Scales of Open Spaces, Gardens and Parks. . . . .	70
Figure 7_39: Locating Fire Station on narrow road should be avoided. . . . .	72
Figure 7_40: Fire station situated on 120 feet road . . . . .	72
Figure 7_41: Fire station access through a major street. . . . .	72
Figure 7_42: School on 12 m road causes traffic congestion during opening and closing hours. . . . .	72
Figure 7_43 School situated on well connected major road . . . . .	72
Figure 7_44: On ground scenario of a School situated on well connected major road. . . . .	72
Figure 8_1: Envisioning Built form for LAP . . . . .	75
Figure 8_2: Form Based Regulations- Regulating Plan. . . . .	76
Figure 8_3: Example of Form Based Regulations. . . . .	78
Figure 9_1: Additional Floor space can be consumed on the same plot . . . . .	83
Figure 9_2: Additional Floor space can be availed as TDR. . . . .	83
Figure 9_3: After Amalgamation with neighbouring plot, Additional Floor space can be availed as TDR. . . . .	83
Figure 9_4: TDR of full plot area . . . . .	83
Figure 9_5: Conditions of Compensations for the persons affected by the LAP . . . . .	84
Figure 10_1: Meeting of Persons Affected By LAP . . . . .	91
Figure A3_1: Various Stages of Total Station Surveying . . . . .	113
Figure A3_2: Various Stages of Total Station Surveying . . . . .	114
Figure A3_3: Aerial Triangulation in Drones. . . . .	115
Figure A3_4: High resolution drone image for mapping of large areas . . . . .	115
Figure A3_5: Ortho-photo-mosaics image . . . . .	115
Figure A3_6: layers for image processing in drone . . . . .	116
Figure A4_1: Planning framework of Ireland . . . . .	119
Figure A4_2: LAP Guidelines for Planning Authority Document . . . . .	119
Figure A4_3: Statutory Provisison of LAP in Planning and Development Act, 2000 of Ireland . . . . .	120
Figure A4_4: Indicative Time Frame for Preparation (to coming into the force) of LAP . . . . .	121
Figure A4_5: Example of LAP: Masterplan of Southdocks LAP, City of cork, Ireland, . . . . .	122
Figure A4_6: Planning framework of Bhutan . . . . .	123
Figure A4_7: Urbanisation Management Control Area Concept of Bhutan . . . . .	123
Figure A4_8: Process and Stages of Bhutan Land Pooling Mechanism . . . . .	123
Figure A4_9: The Local Government Act of Bhutan, 2009 . . . . .	124
Figure A4_10: Example of LAP in Bhutan . . . . .	125
Figure A4_11: Sample Drawings of LAP in Bhutan . . . . .	125
Figure A4_12: Planning framework of Maharashtra . . . . .	126
Figure A4_13: Proposed Landuse Plan of BKC . . . . .	128
Figure A4_14: Implimentation of Projects in BKC . . . . .	129
Figure A4_15: Statutory Provisison of Plans for comprehensive Development in M R & T P Act, 1966 of Maharashtra . . . . .	130
Figure A4_16: Section 33, Statutory Provisison of Plans for comprehensive Development in M R & T P Act, 1966 of Maharashtra . . . . .	130
Figure A4_17: E-News Paper Reporting on LAP in Mumbai_1 . . . . .	131
Figure A4_18: E-News Paper Reporting on LAP in Mumbai_2. . . . .	131
Figure A4_19: MPD-2021 . . . . .	132
Figure A4_20: key Highlights of MPD-2021 . . . . .	132
Figure A4_21: Statutory Provision on MPD -2021 for sanctioning LAP. . . . .	133
Figure A4_22: Example of Ward Level Planning (LAP) studies conducted by DUAC . . . . .	133
Figure A4_23: E-News Paper Reporting on status of LAP in Delhi_1. . . . .	134
Figure A4_24: E-News Paper Reporting on status of LAP in Delhi_2 . . . . .	134
Figure A4_25: Planning framework of Madhya Pradesh. . . . .	135
Figure A4_26: Statutory Provisison of constitution of special areas in M.P.T.&C.P. ACT, 1973. . . . .	135
Figure A4_27: ABD Master Plan Report for Indore Smart City . . . . .	136
Figure A4_28: RAJWADA - ABD Master Plan for Indore Smart City . . . . .	136
Figure A4_29: Planning framework of Kerala . . . . .	137
Figure A4_30: Statutory Definition of LPAs in KTCP Act, 2016 . . . . .	137
Figure A5_1: Dhal ni Pol - A LAP for Heritage Precincts . . . . .	140

## List of Table

Table 2_1: Provisions in the GTPUDA, 1976 for preparation of LAP. . . . .	13
Table 7_1: Corner plot Radius . . . . .	62
Table 9_1: Sample OWNER'S CONTRIBUTION FORM to calculate the compensation to the plot owners. . . . .	84
Table 9_2: Abstract Sheet for Cost of Works . . . . .	85
Table 9_3: Cost Estimation Form and its components. . . . .	85
Table 9_4: Revenue Generation Estimation Form and its components . . . . .	87
Table A1: Maps and Layouts to be collected from the authority. . . . .	106
Table A2: Special Planning Areas under MMRDA . . . . .	125

## List of Abbreviations

ABD:	Area Based Development (component of the Smart Cities Mission of the Government of India)
ACTP:	Additional Chief Town planner
ADA:	Area Development Authority
AG:	Advisory Group
AMRUT:	The Atal Mission for Rejuvenation and Urban Transformation
AUDA:	Ahmedabad Urban Development Authority
BRTS:	Bus Rapid Transit System
CBD:	Central/ Commercial Business District
CDP:	City Development plan
CIT:	City improvement Trust
CMP:	City mobility plan
Co.Op:	Co-operative Housing society
CPHEEO:	Central Public Health and Environmental Engineering Organization
CSO:	City Survey officer
CTP:	Chief Town planner
DCR:	Development Control regulations
DILR:	District Inspector of Land Records
DP:	Development Plan
DSO:	District Survey Officer
ERC:	Expert Review Committee
EWS:	Economically Weaker Sections
FBR:	Form Based Regulations
FGD:	Focused Group Discussion
FP:	Final Plot
FSI:	Floor Space Index
GIDC:	Gujarat Industrial Development Corporation
GoG:	Government of Gujarat
GOVT:	Government
GTPUDA:	The Gujarat Town Planning and Urban Development Act 1976
GTPUDR:	The Gujarat Town Planning and Urban Development Rules 1979
Guj.:	The state of Gujarat in India
HRIDAY:	The Heritage City Development and Augmentation Yojana
HT:	High tension (lines)
ILR:	Inspector of Land Records
IPT:	Intermediate Public transport
IRC:	Indian Roads Congress
JTP:	Junior Town Planner
KJP:	kami Jasti Patrak
LAP:	Local Area Plan
LPA:	Local planning Area
LRO:	Land record Officer
LVC:	Land Value Capture



---

MoHUA:	Ministry of Housing and Urban Affairs
MRTP:	the Maharashtra Regional and Town Planning Act of 1966
NBC:	National Building code
NMT:	Non-motorized transport
OFC:	Optical Fibre cable
ONGC:	Oil and Natural Gas Corporation
OP:	Original Plot
PPP:	Public Private Partnership
RERA:	Real Estate Regulatory Authority
ROW:	Right of Way
SEWS:	Socially and Economically Weaker Sections
SFP:	Semi-Final Plot
SIR:	Special Investment Region
SOR:	Schedule of Rates
SPRR:	Sardar Patel Ring Road in Ahmedabad, India
SPA:	Special planning authorities
STP:	Sewage Treatment Plant
T P S:	Town Planning Scheme
TDR:	Transferable Development Rights
TOD:	Transit oriented Development
TOZ:	Transit Oriented Zone
TPO:	Town Planning Officer
TPVD:	Town Planning and Valuation Department
UD&UHD:	Urban Development and Urban Housing Development department of GoG.
UDA:	Urban Development Authority

*Page Intentionally Left Blank*

# 01.

---

## Introduction

- 1.1 Why this Manual?
- 1.2 What does it Provide?
- 1.3 How is the manual structured?

### **Highlights**

- o *The main purpose of this manual is to provide stage-by-stage guidance for preparation of local area plans to the new generation planners and professionals in simplified terms and illustrative format, without much legal jargon.*
- o *The manual draws upon the deep knowledge, experience and learnings of senior planners in government and practitioners in the field, with objectives to simplify and expedite the process of urban spatial planning, to bring everyone on the same platform and to facilitate organized development on ground.*
- o *The manual is not a statutory document. It should be used in conjunction with GTPUD Act 1976 and the GTPUD Rules 1979. The Act, the Rules and the extant GoG orders must be the final reference in case of any confusion, inconsistency or discrepancy in interpretation of any part of this manual.*

## 1.1 Why this manual?

The Local Area Plan (LAP) mechanism has been recently adopted by the Government of Gujarat (GoG) as part of its statutory urban planning framework in 2014. The addition of section 76-A in the Gujarat Town Planning and Urban Development Act (GTPUDA) 1976, in 2014 and a subsequent amendment in 2017 was done to include “Special provisions for Local Area Plan”. The addition of LAP mechanism as part of the already established and much appreciated DP-TP mechanism has further strengthened the overall statutory framework of the state. The addition of LAP as part of the statutory urban planning regime falls perfectly in line with the progressive nature of the state where urban planning mechanisms have continuously evolved by the virtue of such amendments ever since the inception of its first planning act in 1915.

In spirit of continuing this evolution the main purpose of this manual is three-fold:

- To provide clear stage-by-stage guidance for preparation of Local Area Plans to the new generation urban planners, urban designers and allied professionals within the government authorities and also as consultants undertaking the preparation of Local Area Plans within the State of Gujarat.
- To explain the process in simple terms and in illustrative format without much of legal jargon to bring everyone on the same platform
- To simplify and expedite the process of urban spatial planning, and facilitate organized, sustainable and livable development on ground.

For this, the manual draws upon the deep knowledge, experience and learnings of senior planners within the government authorities, practitioners in the field and academia involved in researching best practices around the globe. The process of preparing this manual is undertaken with the objectives to simplify and expedite the process of urban spatial planning, to bring everyone on the same platform and to facilitate organized development on ground.

The manual is NOT a statutory document, but its main purpose is to provide guidance and support to facilitate and improve the preparation of LAP. In this context, this manual can also be a good reference for planners and professionals from other states looking for learning this innovative and progressive planning mechanism of Gujarat.

## 1.2 What does it provide?

To achieve the aforementioned purpose, this manual provides detailed, stage-by-stage guidance to everyone involved in preparing LAP under GTPUDA, and brings everyone on the same platform by providing the same consistent information and guidance to all. This manual provides clear guidance regarding:

- Overall LAP preparation process at all stages.
- Surveys and analysis of existing situation
- Engagement of land owners, beneficiaries and stakeholders
- Deriving purpose, vision and principles and preparing schematic layout of LAP
- Planning and design of LAP
- Compensation to the land owners contributing towards LAP
- Cost estimation & Revenue Generation
- Roles and responsibilities of authority and government etc.

## 1.3 How is the Manual Structured?

**Sections & chapters:** The manual is structured in the same order as the various stages of LAP process currently practiced within the government authorities under provisions of the GTPUDA 1976. The chapters are organized to provide step-by-step guidance for the tasks to be carried out under each stage starting from delineating LAP Boundary and Base Map preparation, to Publication of LAP Boundary, to Draft LAP and sanction of LAP. These stages and are organized in three such sections clearly titled based on the stages of LAP: as indicated below;

- Stage 1: Publication of LAP boundary
- Stage 2: Preparation of Draft LAP
- Stage 3: Publication and Sanction of LAP

These stages and steps thereunder are also clearly identified in flow-chart no .1, showing current LAP mechanism under chapter 2.3.

Beyond this, under the section titled General Guidance this manual provides detailed guidance regarding Institutional framework, roles and responsibilities; Implementation and finance management.

**Appendix:** for this, the manual includes: Survey methods; Data to be collected from various departments, review of various examples of LAP's in India and around the Globe; Guidance for appointment of consultants.

**Recommended Improvements in BROWN Text:** The manual is written to provide guidance for preparing LAP as currently practiced under the provision of the Act and the Rules. However, beyond the current conventional practice this Manual also makes recommendations to carry out some improvements either in the process or in the institutional framework by the authority and/or the government (without requiring amendments in the act). All such recommended improvements are indicated with **BROWN** colored text in this manual.

**IMPORTANT NOTE:** This manual is not a statutory document. It must be used in conjunction with GTPUD Act 1976 and the GTPUD Rules 1979 and the extant orders by the Government of Gujarat (GoG). In case of any confusion, inconsistency or discrepancy in interpretation of any part of this manual, the Act, the Rules and the extant GoG orders must be the final reference.

# 02.

## Purpose and Background of Local Area Plan

- 2.1 Background
- 2.2 Main Provisions in GTPUDA 1976 for preparation of LAP
- 2.3 Current LAP Mechanism
- 2.4 Recommended Improvements in LAP Mechanism

### Highlights

- *Up till very recently, the statutory planning mechanism in Gujarat has been focused primarily on Greenfield development through its widely appreciated and successful DP - TP mechanism. The Government of Gujarat (GoG) in 2014 and 2017 amended the GTPUD Act 1976 to include Special provisions for preparing Local Area Plans.*
- *Some key reasons why LAP mechanism is urgently required for Indian cities are:*
  - *It allows the cities and urban authorities to re-plan, revive and regenerate the existing developed inner city areas.*
  - *It improves and enhances the existing developed areas. & provides more detailed planning proposals and policies for the areas anticipating a substantial transformation.*
  - *It involves elements of plot reconstitution, Master Planning, designing of urban realm and regulating the private realm through form based regulations.*
  - *It prioritizes public welfare and look into quality, quantity and maintenance of social amenities, environment and infrastructural provisions.*
  - *It acts as a micro-level planning tool to implement the larger vision embedded in the DP for specific areas.*
  - *It provides opportunity for more number of people to access sustainable transit options & to live and work within the city itself.*
  - *Its intention is to gratify the social and economic aspirations by building well-organized and effective physical environment.*
- *Some key areas of improvement for ease-of-development, planned growth and sustainable development are identified in this chapter. The details of such improvements are provided in the relevant chapters of the manual.*

## 2.1 Background

### 2.1.1 What is Local Area Plan?

A Local Area Plan is a statutory planning mechanism that is devised to improve and enhance the existing developed areas. It is prepared for improving, retrofitting and/or solving issues in these currently developed areas. They are intended to provide more detailed planning proposals and policies for the areas which are anticipated to experience substantial redevelopment and transformation.

Up till very recently, the statutory planning mechanism in Gujarat has been focused primarily on Greenfield development through its widely appreciated and successful DP – TP mechanism. However, over the years the older, inner city areas and developed suburbs were left to their own fate as they continued to become congested and deteriorate over time. Therefore, to address the various issues and for reimagining the existing developed inner city neighborhoods for the purpose of Regeneration, Redevelopment and conservation (as the case may be), the Government of Gujarat (GoG) in 2014 and 2017 amended the GTPUD Act 1976 to include Special provisions for preparing Local Area Plans (Ref. Amendment by Guj 11 of 2014. S. 19 and Amendment by Guj. 22 of 2017. S .6).

The LAP mechanism allows the cities and urban authorities to re-plan, revive and regenerate the existing developed inner city areas. The LAP mechanism is a micro-level planning tool used to implement the larger vision embedded in the DP on the specific areas. It involves elements of plot reconstitution, Master Planning, designing of urban realm and regulating the private realm through form based regulations. Additionally, the LAP process involves consultation with multiple stakeholders and plot-owners and therefore requires to be conceptualized to incentivize and promote redevelopment for ease of its implementation.

Depending on the vision for improving a developed inner city area, the Local Area Plans can be of different types:

- LAP for Urban Regeneration of Developed Areas
- LAP for Improving Urban Areas with Heritage Value
- LAP for Improving Areas with Informal Settlements
- LAP for Special Development Areas
- LAP for special purpose areas such as areas for religious tourism, healthcare tourism, Knowledge precinct and institutional areas

The area selected for LAP is studied in detail, issues of relevance are identified and then analyzed prior to establishing proposals for future development.



LAP proposals prioritize public welfare and look into quality, quantity and maintenance of social amenities, environment and infrastructural provisions. LAPs are instruments used for renewal of a city's built environment. LAP provides a balanced approach for the needs of the stakeholders, developers and requirements of the planning authorities. Its intention is to gratify the social and economic aspirations by building well-organized and effective physical environment.

### 2.1.2 Why LAP mechanism?

Over the last few decades, the cities in Gujarat have experienced rapid urbanization with large number of people migrating to urban areas for better opportunities. **The Urban Development & Urban Housing Department (UD&UHD) along with the Town Planning and Valuation Department** have been proactive in undertaking coordinated efforts for planned Growth of urban areas through its widely appreciated and successful DP – TP mechanism. Such spatial planning efforts undertaken have primarily focused on horizontal expansion of the city to add newer areas and delivery of serviced land for enabling such expansion through preparation of Town Planning Schemes. Although, the DP-TP mechanism has been a huge success in the state and highly appreciated nationally, it is widely acknowledged that such rapid and infinite horizontal expansion into the hinterland is not sustainable. Such horizontal expansion of the city ultimately requires conversion of large quantum of agricultural lands into serviced lands which may lead to environmental concerns due to depleting Agricultural (Greenfield) land over a longer period of time. Moreover, spatial expansion of urban areas have huge implications on the increase in Travel Distances to work place and high dependence on private vehicles leading to traffic congestion. It is also known that horizontal expansion through Greenfield development often has higher implications on the cost of providing infrastructure as compared to upgradation of the existing infrastructure.

On the other hand, the older inner city areas and developed suburbs have often been left to their own fate as they have continued to become congested and have deteriorated over time. Therefore, there is often a felt need for improving and revitalizing these inner city areas through careful examining and planning. Over the years, various Development Authorities in the state have envisioned such urban regeneration and transformation of inner city areas through zoning and regulatory tools while preparing Development Plans. These Proposed zones such as the Central Business District (CBD), Transit Oriented Development (TOD), core city zones, Heritage zones, Other Special Development Zones etc. have been envisioned by the development authorities in the state

under their broader framework for development of their cities through a Development Plan. To materialize such vision on ground these Authorities require an effective, sustainable and implementable micro-planning mechanism.

Taking the cue from world class cities across the globe, it is widely advocated that there is an urgent need for Urban planning mechanisms to evolve and focus on **‘how to allow more people to live and work within the city itself’** rather than pushing them away by offering them choices only in far out places.

A **Local Area Plan** attempts at **incentivizing** such **inner city developed areas** to **redevelop and regenerate**, allowing **more number of people** to get better **access to amenities** while **enhancing the existing road network** and upgrading infrastructure. The LAP as a mechanism also aims at a **sensitive approach** to planning and implementation in the areas with built fabric of heritage and/or cultural value, with the aim to **conserve and enhance the existing culture, heritage and environment** of such areas.

### **2.1.3 Understanding History and Background of LAP Mechanism in India and abroad**

#### **First Evidences of Inner city Improvement: The City Improvement Trusts (CIT's)**

The concept of improvement of existing urban areas has been recognized since the early stages of urbanization in India. The first City Improvement Trust (CIT) was established in the Bombay Providence in 1898 following the Bombay Plague of 1896 for the purpose of improving the poor Housing and sanitation conditions in Tenements and slums. The Bombay Improvement Trust was legally positioned with powers to invoke the eminent domain to decongest slums and improve the living conditions of the poor. The Trust also focused on physical planning which included creation of new streets, constructing housing for low income residents, reclaiming land for urban expansion in addition to decongesting crowded localities. These improvements were specifically intended to enhance and glorify the city's image as a center of imperial and commercial power. Subsequently in the early 20th Century, multiple city improvement trusts were established across various provinces in colonial India such as Mysore (1903), Calcutta (1911), United Provinces; Lucknow (1919), Kanpur (1919), Allahabad (1920), Nagpur (1936) and Delhi (1940) which undertook the preparation of various improvement schemes which primarily focused on improving the existing urban developments.

### **Town Planning Schemes and Development Plans: From city Improvement to City Expansion**

Subsequently the Schemes primarily focused on Greenfield developments and became a good tool for land reconstitution to achieve planned road network and infrastructure. Under the Bombay Town Planning Act of 1915, the local authorities under the Bombay presidency were empowered to prepare Town Planning Schemes for various areas within their jurisdiction. Eventually, it was realized that the Town Planning Scheme helped to improve only smaller areas and parts of cities and towns. But the need for a statutory planning mechanism that allows authorities to prepare macro level Development Plans for the cities and towns, which could then be implemented at micro level through T P Schemes was realized. The new Bombay Town Planning Act, 1954 was passed that replaced the previous planning act to establish the two level DP – T P SCHEME mechanism. As the cities grew rapidly beyond their boundaries, the outside areas were also needed to develop in a planned manner. The enactment of Gujarat Town Planning and Urban Development Act, 1976 allowed creation of Development Authorities who were responsible for preparing Development Plan for the whole urban area, and for Town Planning Schemes to facilitate organized development and obtain land for roads, infrastructure and amenities in the growing areas.

### **What is LAP in Gujarat?**

Up till very recently, the statutory planning mechanism in Gujarat has been focused primarily on such Greenfield development through its widely appreciated and successful DP – TP mechanism. However, over the years the older, inner city areas and developed suburbs were left to their own fate as they continued to become congested and deteriorate over time. Therefore, to address the various issues and for reimagining the existing developed inner city neighborhoods for the purpose of Regeneration, Redevelopment and conservation (as the case may be), the Government of Gujarat (GoG) in 2014 and 2017 amended the GTPUD Act 1976 to include **Special provisions for preparing Local Area Plans** (Ref. Amendment by Guj 11 of 2014. S. 19 and Amendment by Guj. 22 of 2017. S. 6).

Local Area Plan in Gujarat means a statutory planning mechanism to improve an existing developed area prepared, submitted and sanctioned under the provisions of section 76-A of the Gujarat Town Planning and Urban Development Act (GTPUDA 1976). The LAP mechanism was conceptualized from the current need for Revitalizing, Regenerating, Redevelopment and Conservation of already developed areas including the inner city and old city heritage areas in Indian cities. The LAP identifies the

need for providing an **Incentive based redevelopment/conservation** mechanism for its implementation rather than compulsory acquisitions or forceful regulations that put conditions and additional costs on individual land owners.

There are multiple/different kinds of plans which are either labeled as Local Area Plan or may be intended to achieve similar objectives as those described for a Local Area Plan above. However, these plans may or may not exactly fit under the above definition/description. A few examples of such plans and their interpretations are described below:

1. There are multiple examples of local area planning which are enabled under statutory provisions and prepared to achieve similar objectives, but unlike the LAP under GTPUD Act, 1976 these plans are not conceptualized as an incentive based redevelopment mechanism. Below are a couple of examples:

- > **Mumbai, Maharashtra:** As Mumbai is a large urban area, it requires a mechanism below the Development Plan level to plan for development or redevelopment of smaller areas. However currently the planning act does not have a mechanism for such local area plans. Instead, when required such areas are put under Special Planning Authority (SPA) constituted under the section 40 of MRTP Act, 1966; and subsequently for planning and sanctioning for the same is carried out under section 115 of the act. Plan for Bandra-Kurla Complex (BKC) and back-bay reclamation are some of the examples of such planning. Although constitution of such SPAs help carry-out local area planning, it is not easy to frequently create such authorities for every areas requiring micro-level planning. Also, It excludes the area from the development plan.

*(Refer Appendix 4.3 for details)*

- > **Ireland:** Similarly, examples of Local Area Plans also exist in countries like Ireland since the 2000's where an LAP is envisioned as the principal statutory planning instrument for setting out a balanced understanding, vision and spatial strategies at the local level. In this case a good LAP is understood a plan that balances the needs and aspirations of the community with the requirements of the Planning Authority and the expectations of developers and other stakeholders. It provides a framework for delivery that guides quality and facilitates consistency in development management. *(Refer*

*Appendix 4.1 for details)*

2. Some plans are prepared for achieving similar objectives such as improving a Local Area, but do not have the backing of the statutory provisions under a planning act for sanctioning or implementing them. Moreover, when implementation of such plans is highly dependent on the availability of huge capital and acquisition of land rather than an incentive based implementation approach. It becomes very difficult to implement them. Below are such examples:
  - **Delhi:** Some recent attempt to improve the existing urban areas was reflected in Delhi's master plan prepared in 2007, which included a provision for preparing Local Area Plans for achieving similar objectives as those defined above. Subsequently about 33 LAPs were prepared under this provision. But they were not implemented due to confusion regarding who should sanction them. *(Refer Appendix 4.4 for details)*
  - **Indore:** (Area Based Development under Smart Cities Mission): The Area Based Development (ABD) component under the Smart Cities Mission is conceptualised to be used as a tool to develop/ redevelop the identified areas. Many of the cities have identified areas under government ownership for smartcity ADB Projects so that it becomes easier to replan and redevelop the area. Indore, on the other hand has identified an area within the core city area for smart city ABD. However, the land required to improve the street network in this area is primarily under private domain. Hence unless it uses an "incentive based redevelopment approach" it may not be the same as "Local Area Plan" under GTPUDA. *(Refer Appendix 4.5 for details)*
3. Some other plans prepared for a specific area may be statutory, but are prepared for development in Greenfield areas. Such plans may be conceived like township plans.
  - **Bhutan:** Bhutan prepares LAP since 2004 for the land pooling and reconstitution schemes throughout the country for pursuing the urban development and to execute the funded projects from the renowned institutions such as the World Bank and Asian development bank (ADB). *(Refer Appendix 4.2 for details)*
4. In some other places a similar terminology may be in use, for a statutory planning mechanism but the objectives may be completely different to those explained and described above.

- **Kerala:** The state of Kerala prepares plan for Local Planning Areas (LPA). Such a Local Planning Area (LPA) in Kerala is generally the entire area under the municipalities or other ULBs. Therefore such LPA plans are more like a Development Plan or a Master Plan for the whole city or urban area, and should not be confused with LAP mode of Gujarat.

## 2.2 Main Provisions in the GTPUDA, 1976 for preparation of LAP

Local Area Plan is a statutory plan to be prepared and sanctioned under Gujarat Town Planning and Urban Development Act 1976 (GTPUDA). Therefore, the process of preparing a local area plan must adhere to the relevant sections of the act. While the manual is structured in the same order as the stages followed in practice, this order broadly follows the provisions in the act as listed below.

The table below identifies key stages of the process for preparing a local area plan and provides relevant sections of the act applicable at the key stages.

Table 2\_1: Provisions in the GTPUDA, 1976 for preparation of LAP

Sections	Provisions
• Section 76A	• Preparation, sanction etc. of Local Are Plan
• 76A ( 1)	• Power of Appropriate authority to make LAP
• 76A ( 2)	• Publication of Delineated boundary for LAP
• 76A ( 3)	• Contents of LAP
• 76A ( 4) (a)	• Meeting of Owners
• 76A ( 4) (b)	• Publication of Draft LAP
• 76A ( 5)	• Submission of Draft LAP to State Government
• 76A ( 6)	• Power of State Government to Sanction or refuse to sanction the LAP and effect of Sanction
• 76A ( 7) (a)	• Manner of Publication of Sanctioned LAP
• 76A ( 7) (b)	• Date on which liabilities of LAP comes into effect
• 76A ( 8)	• Surrender of Land under public domain to appropriate authority

## 2.3 Current LAP Mechanism

Currently, section 76A of GTPUD Act provides for preparation of Local Area Plan. In the short duration of its inception through amendment in the GTPUD Act, in 2014, the current LAP mechanism provides a strong statement of intent from the GoG and the UD&UHD. Under the current mechanism, preparation of LAPs including the CBD-LAP for Ahmedabad and multiple TOD LAP's have been undertaken by the Ahmedabad Municipal Corporation. However with such a small period of the LAP coming into being as a statutory planning mechanism in Gujarat there is scope for further improving the already well-conceptualized mechanism.

Considering this, the manual takes up the opportunity to include and incorporate some improvements that will result in better urban environment on ground and make the LAP process more efficient and consistent across all LAP's across Gujarat

Various areas of Improvement include:

- Boundary Delineation Process
- Updating Ownership and Freezing of Base Map.
- Contents of LAP including LAP Report
- Manner and medium of conducting Meeting of Persons Affected.
- Time frames for LAP

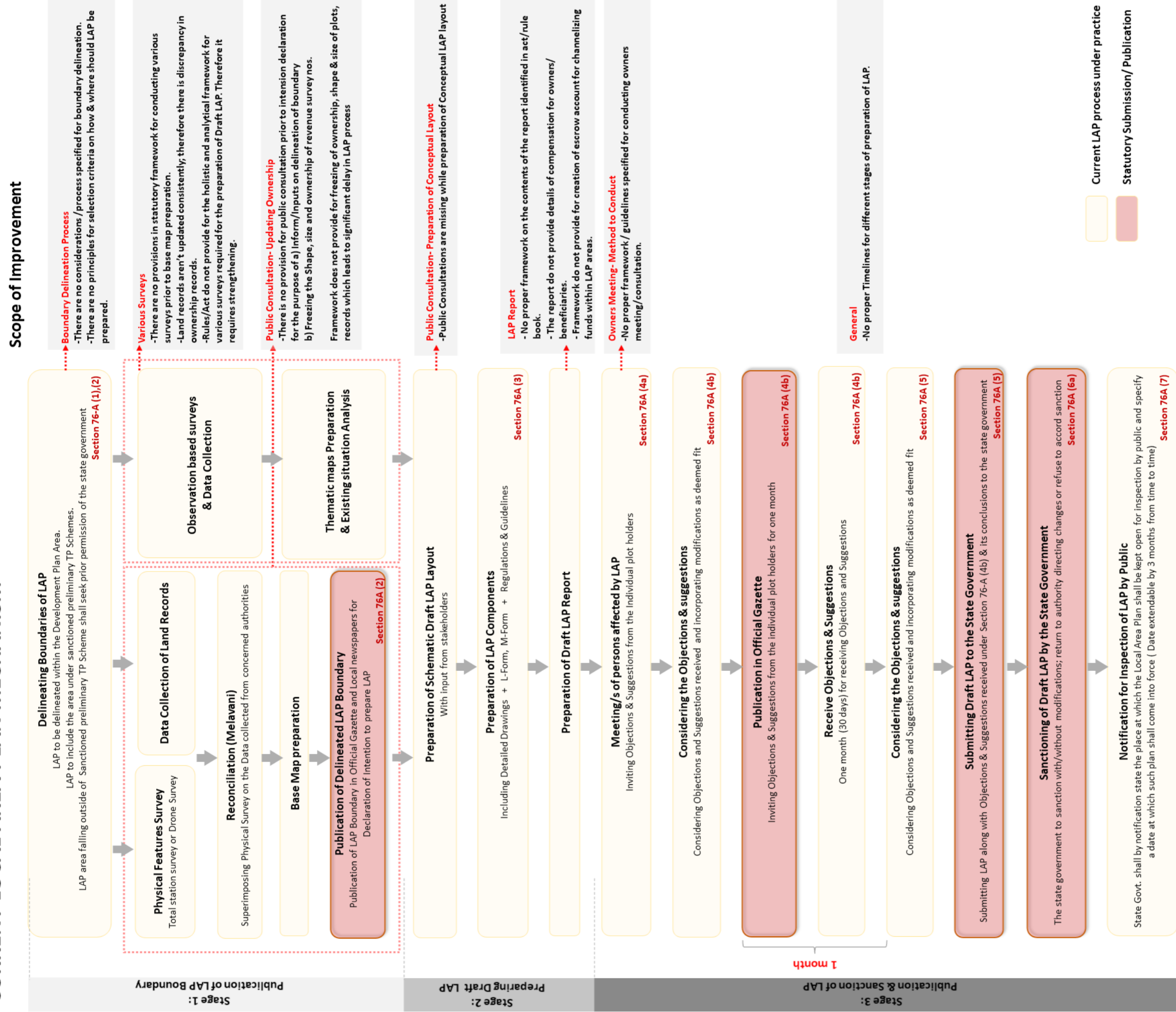
### **Time frames for LAP**

Although there is no specific timeframe for the entire preparation of local area plan, it is necessary to set timeline for LAP. Sufficient time should be provided for background data collection and analyzing the collected data. While fixed timelines should be set for publication, submission and sanctioning process for plans



Flow Chart 1: Existing Local Area Plan Process

# CURRENT LOCAL AREA PLAN MECHANISM



*Page Intentionally Left Blank*

## 2.4 Recommended Improvements in LAP Mechanism

Based on the assessment of current LAP mechanism identified in the previous sub-section, this sub-section identifies improvements in LAP process and its components.

### 2.4.1 Recommended improvements in LAP Process

#### Stage 1: Publication of LAP Boundary

- **LAP Boundary Delineation:** It is recommended that the LAP boundary should be identified based on the Guidance provided in the Development Plan. The LAP boundary may be delineated / re-delineated based on various considerations, studies, surveys as described in detail under chapter 4.3
- **Appointment of Advisors:** At the time of Delineating the Boundary for LAP, the Authority may appoint a set of Advisors for guidance and internal review of the Delineated Boundary and subsequently the draft LAP preparation process at various stages *[Refer chapter 11.2 for details regarding Appointment of advisors]*
- **Appointment of LAP Officer/ LAP coordinator:** At the time of Delineation of Boundary for LAP, the Authority may appoint a LAP Coordinator for coordinating the Process the entire LAP Preparation process as well as to coordinate on Behalf of the Authority with the “Persons affected by the LAP” *[Refer chapter 11.4 for details regarding Appointment of LAP Officer]*
- **Physical Features Survey:** Simultaneously, the authority should do the data collection of land records, ownerships and beneficiaries and conduct Topographic & Physical features surveys *[Refer chapter 5.1 for detailed guidance in conducting physical features survey].*
- **Reconciliation (Melavani) and Preparation of Base Map for all non T P Scheme areas:** The process of Reconciliation (Melavni) should be subsequently undertaken for preparing a Base Map for preparing LAP in all non T P Scheme areas. However the Final sanctioned FP Plan and land records may be considered for Final Base Map in case the LAP is being prepared in an area with sanctioned final T P scheme. *[Refer chapter 5.2 for detailed guidance in undertaking Reconciliation (Melavni) for preparation of Base Map].*
- **Publishing the Base Map and Land Records:** The Authority shall publish the Base Map prepared after Reconciliation (Melavni) as “Draft Base Map” along with the Ownership Records for 15 days inviting plot owners and other stakeholders by public notices to update/verify their land records. *[Refer chapter 5.3 for*

*detailed guidance in publishing the Base Map for verifying the land Records].*

- **Appointment of ILR at the Authority for Updating, revising and freezing of Base Map Being Prepared For non-TP Areas:** The State Govt. may create Cadre post of DILR at the UD&UHD and Subsequently the Settlement commissioner's office may appoint an Inspector of Land Records not below the rank of DILR at the UDA's, ADA's and other Authorities with all powers of Land Revenue Code for updating Land Records. The Authority should submit all queries and requests received for updating the land records to the Inspector of Land Records (appointed at the authority specifically for preparation of LAP) along with the Draft Base Map. The ILR should undertake the revisions required for updating the Draft Base Map and subsequently prepare the Final Base Map. *[Refer chapter 11.1 for details regarding Appointment of Cadre post of DILR and chapter 5.3 for guidance on finalizing the Draft Base Map].*
- **Freezing of Base Map and Records:** After making the required revisions in the Draft Base Map and the Land Records, the Base Map should be referred to as the "**Final Base Map**". The Authority may Freeze the Final Base Map along with the Land Records for all subsequent stages of preparation of LAP. *[Refer chapter 5.3 for guidance on updating & freezing the Final Base Map for Publication of LAP Boundary].*
- **Publication of Delineated LAP Boundary:** The Authority for the purpose of declaring its Intention to prepare the LAP should "**Publish the Delineated LAP Boundary**" in the official Gazette as required under section 76A(2) of the GTPUDA. *[Refer chapter 5.4 for detailed guidance in Publication of Delineated LAP Boundary].*

## Stage 2: Preparation of Draft LAP

- **Collection of Data and stakeholder inputs:** Simultaneous to the physical features survey and Land Records collection for the purpose of Base Map Preparation, the Authority should carry out consultations and informal discussions to get inputs from stakeholder, and conduct various observation based and contextual surveys such as land use survey, building use, NA conversions, infrastructure network etc. that would be useful in Analyzing the Existing Situation as well as for preparing the Draft LAP Layout *[Refer Appendix 1 for detailed guidance on the various data that the Authority may collect].*
- **Existing Situation Analysis and preparation of Thematic Layers:** Before preparing schematic layout, the authority should prepare various thematic maps with the help of the Data Collected through

surveys and undertake its analyses. *[Refer chapter 6 for detailed guidance undertaking Analysis of Existing Situation].*

- **Preparing vision and concept for LAP:** Prior to Preparation of the Draft LAP by the Authority, the Vision and Concept for preparing the LAP should be identified based on the broader proposals listed in the Development Plan and the inputs received by the various Stakeholders and the Persons Affected by the LAP. *[Refer chapter 7.1 & 7.2 for detailed guidance Visioning and conceptualizing the purpose of LAP].*
- **Preparation of Conceptual Graphics for LAP:** The Authority may prepare few Graphics to conceptualize the vision identified for the preparation of LAP.
- **Preparation of Schematic Draft LAP Layout:** The Authority should substantiate a schematic LAP layout from the conceptual layout. The Schematic LAP Layout may include all integral proposals including proposals for Areas with specific urban character and built form and subsequent regulations, street network design, open spaces, Network of Green spaces, Waterbodies, Parking Management, integrating Informal Activities, Affordable housing and economically weaker sections housing, Physical infrastructure, social amenities etc. *[Refer chapter 7.4 to 7.12 for detailed guidance undertaking preparation of Schematic Layout].*
- **Identifying Land Contributions and compensation/ incentives to be given to the persons affected by the LAP:** Parallel to the preparation of Schematic LAP Layout, the Authority should start recording the details of all the “Persons Affected by the LAP” in an owners contribution form. This form should record the Land contributions towards the Public Domain by “persons affected by the LAP”. Such Form should also including identification of various models for compensation to the “Persons affected by the LAP”. *[Refer chapter 3.3.1 and chapter 9 for detailed guidance undertaking identification of contributions and compensations].*
- **Identifying Cost of preparation of LAP:** Parallel to the preparation of owners contribution form and Schematic LAP Layout, the Authority should work out various expenses that would add up to account towards the “Cost of preparation of LAP” in Cost Estimation Form. These costs may include costs incurred in undertaking physical features surveys and other surveys, cost of works for additional infrastructure or upgradation of existing Infrastructure, legal requirements under the Act, cost of conducting “Meeting/s of Persons Affected” and costs that may be incurred for compensation to be paid to individual land owners. Parallel to the preparation of Schematic LAP Layout, the

Authority should start recording the initial details of all the “Persons Affected by the LAP” in an owners contribution form. *[Refer chapter 9 for detailed guidance undertaking identification of cost of preparation of LAP].*

- **Preparation of Draft LAP Report & Finalizing Draft LAP:** The Authority should draft a formal report to document all stages in preparation of the Draft LAP from Beginning to End. The Schematic Layout, Various Forms ( including owners contribution form and cost estimation form) and the LAP Report should together compromise the “**Draft LAP**”

### Stage 3: Publication and Sanction of LAP

- **Meeting/s of Persons Affected by LAP:** The Authority after preparing the Draft LAP should invite all stakeholders for a “**Meeting of the Persons Affected by LAP**” and record all suggestions and objections made in writing. The Authority should consider all such objections and suggestions and make modifications to Draft LAP as deemed appropriate in **consultation with the Advisors**. *[Refer chapter 10.1 & 10.2 for detailed guidance for undertaking Meeting of Persons Affected by the Scheme].*
- **Publication of Draft LAP:** The Authority should publish the modified **Draft LAP in official gazette** and **Invite objections and suggestions** as required under the section 76A( 4)(b) of the GTPUDA. The Draft LAP should be open for examination by the stakeholders and for registering their formal Suggestions and objections with the Authority within a period of 30 days from the date of publication of the Draft LAP by the Authority. *[Refer chapter 10.3 for detailed guidance for publication of Draft LAP].*
- **Modification to Draft LAP:** The Authority should consider all Objections and Suggestions received within the specified period from the date of publication of Draft LAP by the Authority and make modifications to the Draft LAP as deemed fit **in consultation with the Advisors**. *[Refer chapter 10.4 for detailed guidance for making modifications to the Draft LAP].*
- **Submission of Draft LAP to the State Government:** After making the necessary modifications to the Draft LAP, the Authority should submit the Draft LAP (along with the list of objections and suggestions received and the way they were addressed or not addressed with detailed comments as to why they were not addressed) to the State Government for their sanction. *[Refer chapter 10.4 for detailed guidance for Submission of Draft LAP to state govt.].*
- **Appointment of Expert Review Committee (ERC):** It is recommended that the State Government appoints an Expert Review Committee (ERC) which

---

should review and recommend approval of Draft LAP submitted to the government. *[Refer chapter 11.3 for details regarding Appointment of ERC]*

- **Sanction of LAP by the State Government:** After the Authority submits the Draft LAP to the State Government, it should review and recommend changes (if any) before sanctioning the LAP. *[Refer chapter 10.5 for detailed guidance for sanction of LAP].*
- **Notice for inspection of LAP by Public:** If the State Government decides to sanction the LAP, it should issue a notification in the official gazette and in the local newspaper regarding the place at which the Sanctioned LAP should be available for the public to examine.

**GENERAL NOTE:** Refer Flow Chart 2 (Chapter 11)

*Page Intentionally Left Blank*



# 03.

---

## Components of Improved LAP

- 3.1 LAP Report
- 3.2 LAP Maps
- 3.3 Forms
- 3.4 Regulations

### **Highlights**

- *It is important to document the rationales, vision and/or principles behind various decisions taken during preparation of LAP It is recommended that this should be recorded in the LAP Report.*
- *The Various components of LAP includes:*
  - *Report*
  - *Maps*
  - *Forms*
  - *Regulations*

The LAP is composed of maps (showing Plots, Roads and plots allotted for public purpose) and forms. However, for improved planning, it is recommended that a LAP should be composed of the following documents:

- LAP Report
- LAP Statutory Maps
- Forms
- Regulations

### 3.1 LAP Report

The LAP Planning Process should be recorded and documented in a LAP Report. (Refer Figure 3\_1) The report should clearly identify the integral planning decisions pertaining to the LAP. The broad chapterization of the LAP report can assume the following structure:

- **Purpose of LAP:** The chapter clearly records and explains the specific purpose for which the LAP is being prepared. For eg. LAP for Transit Oriented Development, LAP for Central Business District, LAP for preserving areas with Heritage value etc.
- **Site and Context:** This chapter intends to record the characteristics of the area delineated for LAP along with the area's context to its surroundings and the city.
- **Existing situation assessment; Maps and Analysis:** This chapter clearly records all maps prepared after analyzing the various thematic layers for Assessment of existing situation of LAP Area. These layers may include:
  - > Base Map
  - > Land Use and Building Use
  - > Green and Open Space,
  - > Topography and Environment Features Map (including Water Bodies, Water sheds and Flood-prone areas )
  - > Transport Network Map
  - > Infrastructure Map
  - > Informal Activities Map
  - > Land Rates Map
  - > Land Ownership Maps
- **Vision and Concept:** This chapter intends to record the Vision identified for the LAP area after stakeholder consultation. Based on the identified vision, this chapter should also record the concept for preparing the LAP along with 2D/3D visualizations and representations of this concept through Diagrams, Concept Plans, and Graphics etc.
- **Principles and Approach:** This chapter should clearly records and establishes the principles and



Figure 3\_1: LAP Report

Source: Shivranjani TOZ-LAP Report, AUDA, Prepared by HCPDM

Approaches on which the preparation of LAP would be further undertaken.

- **Schematic Layout:** This chapter identifies all proposals with supporting rationale for LAP area based on the Vision, concept and Principles identified. These proposals should be supported with relevant Maps and Graphics. The proposals in the chapter may be subdivided based on the various layers such as:
  - > Urban character and Zoning
  - > Street Network and Guidelines for Street design
  - > Network of Parks, green space, open spaces, water bodies and other natural features
  - > Public purpose plots indicating proposed amenities and social infrastructural plots
  - > Parking Management plan
  - > Informal activities
  - > Physical infrastructure plan including water network, sewerage network, storm water network etc.
  - > Affordable Housing and EWS
- **Regulations and Guidelines for LAP:** This chapter identifies:
  - > Considerations & Recommendations for regulations for private realm.
  - > Considerations & Recommendations for guidelines for public realm.
- Based on the considerations and recommendations the regulations should be identified as described in 3.4.
- **Cost Estimate and Revenue Generation:** This chapter records the various components of LAP and calculates the total cost of preparing the LAP. It may also recommend various strategies for revenue generation for fully or partially funding the implementation of LAP.
- **Phasing and Implementation Strategies:** This chapter intends to record the project phasing and implementation strategies to clearly identify the various timelines and help ease implementation of various components of LAP.

## 3.2 LAP Maps

The LAP maps are one of the key components of LAP. Below is a set of maps that should be included as part of the LAP along with the LAP Report at the prescribed scale of (1:2000) and smaller scale (1:1000, 1:500 or 1:200 etc):

- **Base Map** showing all plots under separate ownerships as existing on ground, all buildings with number of floors, all existing structures, contours. (Refer Fig.3\_2)
- **Land use and building use maps** showing existing land use on each plot and uses in existing buildings
- **LAP Map** showing revised street network identifying new streets of different types such as pedestrian and vehicular, streets to be widened and/or enhanced etc.; Revised plots with plot numbers, areas allotted for public purpose such as plazas, parking and other amenities. (Refer Fig.3\_3)
- **Urban Design and Regulations Map** showing regulations such as build-to-line, arcade, step-backs, permissible building footprint, permissible building height etc. (Refer Fig.3\_3 & 3\_4)
- **Green & Open Space Network Map** showing all existing and natural features including perennial and seasonal waterbodies, wetlands, contours, low lying flood prone areas, overlaid with proposed network of parks, green and open spaces and waterbodies.
- **Infrastructure Map** showing all existing and proposed network of Physical infrastructure including, Water Supply network, Sewerage Network, Storm water Network, Solid waste disposal and transfer Infrastructure, electrical infrastructure etc.



Figure 3\_2: Base Map (existing situation survey map)

Source: Ashram Road, CBD-LAP, AUDA, Prepared by HCPDM

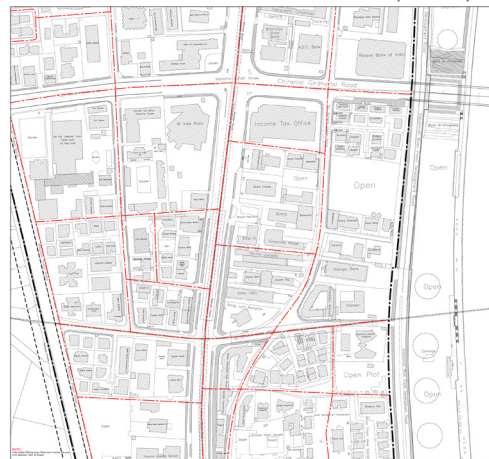


Figure 3\_3: LAP Map Revised Street Network and ROWs

Source: Ashram Road, CBD-LAP, AUDA, Prepared by HCPDM



Figure 3\_4: Urban Design Regulations Map Building Unit

Source: Ashram Road, CBD-LAP, AUDA, Prepared by HCPDM

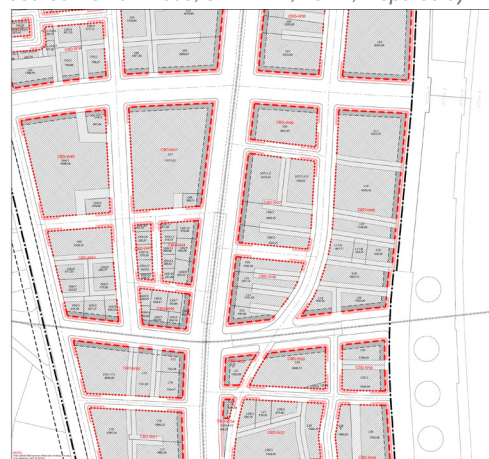


Figure 3\_5: Urban Design Regulations Map Builtform Features

Source: Ashram Road, CBD-LAP, AUDA, Prepared by HCPDM

### 3.3 Forms

Comprehensive LAP Process should contain three major forms to record and register various information related to LAP. They are;

- Owner’s Contribution Form
- Cost Estimation Form
- Revenue Generation Estimation Form

#### 3.3.1 Owner’s Contribution Form

- As Part of the LAP preparation process, Owner’s Contribution Form is filled for the purpose of documentation of ownerships, plot sizes, area deductions, compensations, costing, finances, etc.

(Refer Figure 3\_6)

- Filling up the Owner’s Contribution Form should be the process running parallelly to the various stages. Information collected under the Owner’s Contribution should be filled at the three stages.
  - > **During the base map preparation and existing condition survey stage,** All the existing condition records including ownerships, legal entities (societies, companies) or individuals who have direct ownership on the plot as per legal records along with the plot size, permissible builtup as per prevailing regulations, consumed Floor space, built use etc.
  - > **During the draft stage of LAP,** as per the proposed layout, record the areas affected in the various proposals of LAP such as road widening, public plaza, social infrastructure etc.
  - > **At the stage of calculating the cost of works for the LAP and compensation** for the persons affected by the proposals to get the amount of compensation to be paid. (Refer Ch 9.3.1 for Details)

Sr. No.	Owners Name	TPS Name	TPS No	FP No.	Total FP Area	Public Domain				Social Infrastructure	Pedestrian Roads	Public ROW
						4.5m	3.0m	1.5m	BRTS Plaza			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1		Bopal	3		13250.9	390.2	275.1	0.0	0.0	0.0	0.0	1016.7
2		Bopal	3		14587.6	403.2	0.0	0.0	0.0	0.0	865.3	260.8
3		Bopal	3		4677.7	385.6	0.0	0.0	0.0	0.0	0.0	240.5
4		Bopal	3		16086.1	0.0	469.5	0.0	0.0	0.0	1382.5	0.0
5		Bopal	3		5564.5	0.0	133.2	0.0	0.0	0.0	0.0	592.3
6		Bopal	3		48391.6	901.0	369.1	0.0	0.0	0.0	1064.5	3188.6
7		Bopal	3		5575.0	0.0	263.0	0.0	0.0	0.0	0.0	0.0
8		Bopal	3		16138.5	654.4	0.0	0.0	0.0	0.0	0.0	0.0
9		Bopal	3		16513.6	82.8	908.1	0.0	0.0	0.0	1157.6	0.0
10		Bopal	3		7913.4	0.0	625.4	0.0	0.0	0.0	0.0	0.0
11		Bopal	3		8442.3	231.6	420.4	0.0	0.0	0.0	0.0	0.0
12		Bopal	3		7074.3	0.0	0.0	134.0	0.0	0.0	0.0	0.0
14		Bopal	3		3477.8	235.2	0.0	0.0	0.0	0.0	0.0	0.0
15		Bopal	3		2897.3	170.5	0.0	110.9	0.0	0.0	0.0	0.0
16		Bopal	3		44875.6	0.0	0.0	179.5	0.0	0.0	0.0	0.0
17		Bopal	3		4634.1	371.9	0.0	69.6	0.0	0.0	0.0	0.0
18		Bopal	3		13107.3	464.6	0.0	0.0	499.2	0.0	0.0	0.0
19		Bopal	3		10765.0	399.0	0.0	0.0	0.0	0.0	0.0	0.0
20		Bopal	3		2845.3	111.1	0.0	161.4	0.0	0.0	0.0	0.0
21		Bopal	3		12382.9	0.0	97.4	168.8	0.0	0.0	0.0	0.0
22		Bopal	3		14669.5	0.0	8.3	172.5	0.0	0.0	0.0	0.0
23		Bopal	3		2420.5	97.3	0.0	164.4	0.0	0.0	0.0	0.0
24		Bopal	3		11046.4	524.6	0.0	0.0	0.0	0.0	0.0	0.0
25		Bopal	3		57595.5	803.5	748.7	0.0	0.0	*As per file	0.0	5161.0
25		Bopal	3		57595.5	803.5	748.7	0.0	0.0	*As per file	0.0	5161.0

Figure 3\_6: Owner’s Contribution Form for LAP (TOD LAP\_BRDS)

Source: AMC

### **3.3.2 Cost Estimation Form**

The Cost Estimation Form would provide details of all costs incurred in undertaking various component of LAP such as;

- Costs incurred in undertaking the Existing Situation surveys including the hiring of Survey consultants for on-ground physical features surveys and cost of specialized equipment (such as drones).
- Cost of infrastructure upgradation/addition work.
- Salaries of staff and other legislative requirements as per the prevailing act.
- Cost of publication of the LAP under the provision of the act.
- Cost of conducting meeting/s of person affected by LAP and other such public consultations.
- Compensation for the individual plot owners (if any) who are affected by the proposal of LAP.

*(refer chapter 9.3.1 for details)*

### **3.3.3 Revenue Generation Estimation Form**

The Revenue Estimation form would provide an estimation of the total revenue that can potentially be generated from the revenue sources such as:

- Chargable FSI
- TDR on Public Plots
- Development Fees
- Property Taxes
- Parking Fees
- Vending Charges
- Cost sharing through PPP
- Easement Rights
- Other Tax Benefits

*(refer chapter 9.3.1 for details)*

## 3.4 Development Regulations for LAP

LAP specific development regulations are crucial to transform the existing urban character and to achieve the desired urban form and liveable environment within the LAP area. The Form-based regulations are key to achieving the desirable urban form as per the LAP. (Refer Figure 3\_7 and chapter 8 for details)

Figure 3\_7 and chapter 8 for details)

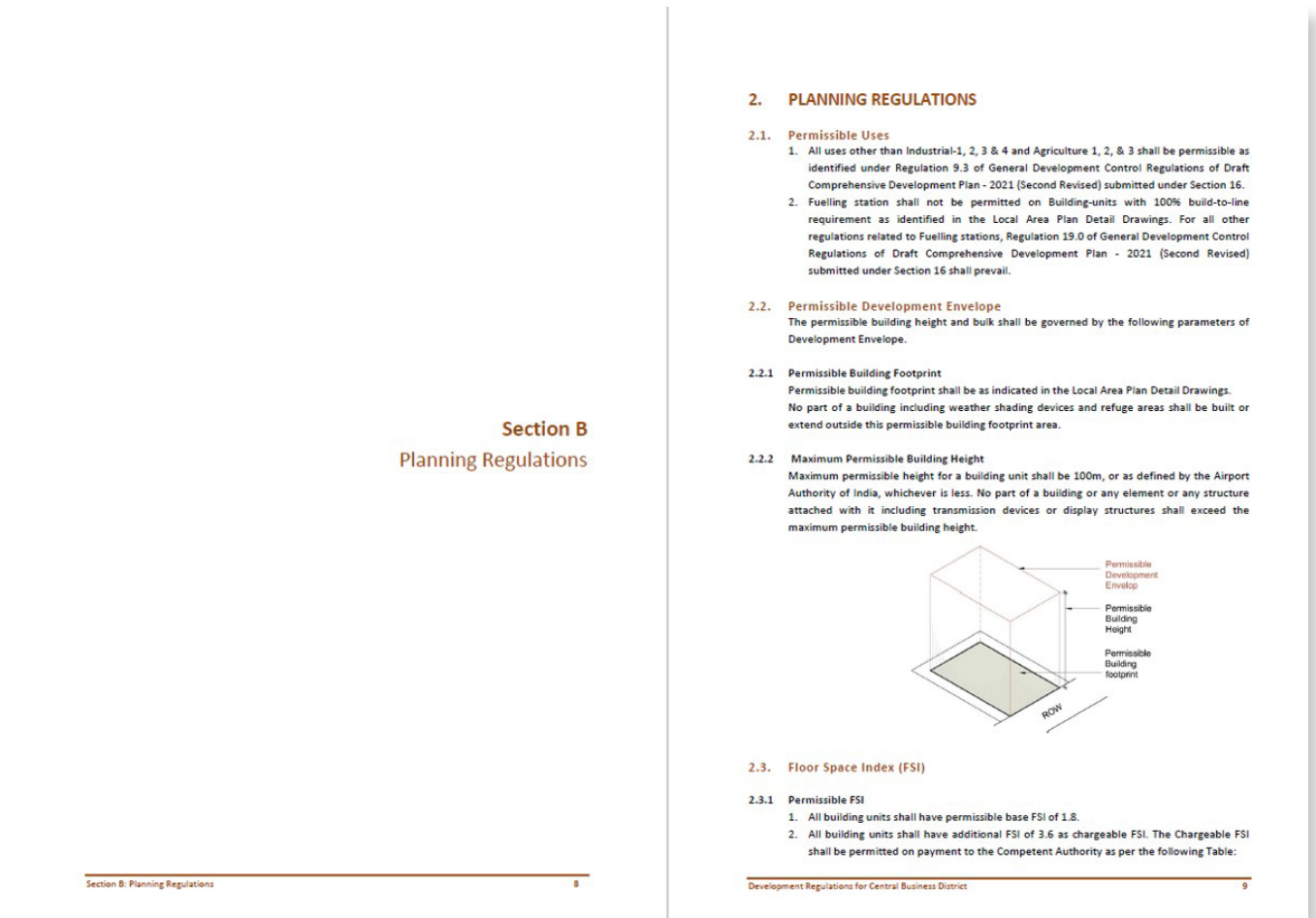


Figure 3\_7: Draft Regulations for CBD-LAP

Source: Ashram Road, CBD-LAP, AUDA, Prepared by HCPDM

*Page Intentionally Left Blank*



Stage  
Publication of  
LAP Boundary

1

04.

---

Identification and delineation of  
area for Local Area Plan

- 4.1 Identifying purpose of LAP
- 4.2 When and where to locate LAP
- 4.3 Considerations for delineating LAP  
Boundaries

**Highlights**

- o *Delineation of LAP requires careful considerations of various aspects to ensure consistency with the overall Development Plan, the purpose and the natural and physical context .*
- o *The authority may appoint a set of Advisors at the time of delineation of LAP Boundary.*

The first essential step for initiating the preparation of LAP is to identify and delineate the area for LAP. Currently, the delineation of LAP is done separately from the DP Process. However, as LAP is micro level planning tool to implement DP, it is recommended that the initial delineation takes place in the DP itself. This will enhance the overall coordination in the development approach and provide a platform for phased development of the DP. Once defined in DP, the LAP boundary should be subsequently refined when it is taken up for detailed planning by the authority. The authority may also appoint a set of advisors at this time for assisting in identification and delineation of area for LAP. The advisors may also assist the authority during the subsequent stages of preparation of draft LAP for publication and submission to the state government for sanction as and when required. [Refer chapter 11.2 for details regarding appointment of advisors]

At this time, it is crucial for the authority to consider three major factors for delineation; i.e. firstly the purpose of LAP; Secondly, when and where to locate the LAP and thirdly, considerations for delineating the LAP boundary.

## 4.1 Identifying purpose of LAP

The purpose for preparation of each LAP may vary from area to area depending on the type of development and character envisioned for the area. LAP can be prepared for improving existing developed areas through redevelopment and/or infill development. Based on the purposes various types of LAP's can be prepared.:

- LAP for Transit Oriented Development (TOD) areas  
(Refer Fig. 4\_1 & 4\_2).
- LAP for Key commercial areas, Central Business Districts (CBD).
- LAP for existing urban areas and core city areas.
- LAP for conservation and revitalization of heritage areas and precincts.
- LAP for areas around existing/proposed railway stations, high speed rail stations, airports etc.
- LAP for special purposes such as improving areas with informal settlements, areas for tourism development, knowledge precincts, etc.

## 4.2 When & Where to locate LAP

LAP should be identified and located based on the need for improvement in the areas where new infrastructure such as Metro or BRTS is planned (Refer Fig. 4\_1 & 4\_2). It can also be identified in the areas with high demand for development and/or redevelopment where the existing infrastructure needs to be improved.

An authority can prepare LAP on an area where Preliminary TP scheme is already sanctioned and being implemented, or an area where no TP is to be done, but the area needs improvement (such as core cities, gamtals, special development areas such as Riverfronts, Gandhi Ashram etc.)

The flexibility in criteria for selection of area enables different contexts to be responded in different ways and setting up of more localized regulations. All statutory plans such as Development Plan and Town Planning Schemes must be considered while delineating the LAP boundaries

Additionally, other schemes/plans such as smart city mission, AMRUT, HRIDAY and City Development plan, City mobility plan or proposals should also be considered while delineation of LAP (Refer Fig. 4\_3)

## 4.3 Considerations for delineating LAP Boundaries

While delineating the area for LAP, the following factors should be considered:

- **Purpose of LAP:** While delineating a LAP, the purpose and vision for the LAP should be kept in perspective. For E.g. LAP for TOD should be delineated considering the area within walkable distances from the public transit.
- **Zone Boundaries as identified in DP:** The LAP boundary should be delineated in such a way that it falls within the same zone of the development plan as much as possible.
- **TPS boundaries:** While delineating the LAP boundary, it is important to consider the existing TP Scheme boundaries. The LAP boundary should be ideally delineated in such a way that it falls within the same TP Scheme area. However, to successfully meet the purpose and vision of LAP, it may be required for areas under multiple T P schemes to be delineated as a single LAP.
- **Existing development and neighborhood character:** The areas that have a similar type of existing development and neighborhood characteristics should be delineated within the same LAP.



Figure 4\_1: LAP zones along TOD Corridors of Ahmedabad City  
Source: Draft TOZ-LAP Report, AUDA



Figure 4\_2: Shivranjani TOD-LAP  
Source: Draft TOZ-LAP Report, AUDA

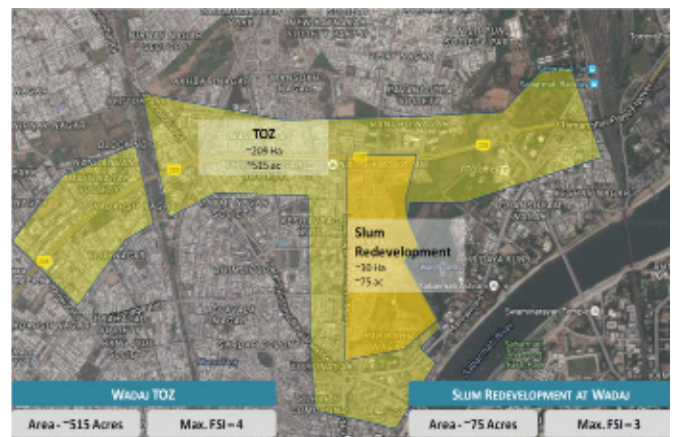


Figure 4\_3: WADAJ TOD - LAP & Slum Redevelopment  
Source: Ahmedabad Smartcity Proposal, AMC

- **Existing physical features (both man-made and natural):** The delineation of LAP boundary should make use of the physical boundaries or barriers such as built fabric, DP roads, existing railway lines, rivers, canals, etc. to define its limits. The delineation of LAP boundary should use indicators such as the major DP Roads or zone boundaries to define its limits.
- **Number of Properties:** The LAP should be delineated to keep the number of properties manageable at the time of considering the suggestions and objections raised by the person affected. The number of properties should also be manageable at the time of undertaking detailed property-wise delineation.
- **Relevant administrative boundaries:** While delineating the LAP boundary, important administrative boundaries such as ward boundaries, municipal boundaries, planning and service area boundaries should also be considered.

# 05.

---

## Base Map Preparation and Publication of LAP Boundary

- 5.1 Physical Features Survey
- 5.2 Preparation of Base Map
- 5.3 Finalizing the Base Map
- 5.4 Publication of LAP Boundary

### **Highlights**

- *To prevent any future complications, a precise Base Map is critical for the whole process of preparation of LAP. The procedure to prepare an accurate Base Map is detailed out in this chapter with detailed guidance for the following:*
  - *Detailed survey of physical features, and collection of data and property records*
  - *Reconciliation (melavani) of maps and records for the preparation of the draft base map*
- *For making this process more direct and less time consuming it is recommended that an Inspector of Land Records not below the rank of DILR may be appointed by the government with statutory powers & functions at the authority office itself to verify, update and certify the land records and the base map.*
- *Before Publication of LAP boundary by the authority, the base map should be reviewed by the Advisors including various domain experts appointed by the authority.*

The authority should carry out detailed high-quality surveys with help of qualified surveyors in consultation with the DILR, and initiate data collection for the preparation of Base Map after the LAP boundary delineation. The Base Map preparation should require detailed surveys and data collection of:

- All physical features in the area
- All built forms, structure, utilities in the area
- Data of all land & property owners, occupants, beneficiaries in the area
- All maps & layouts from various authorities for verification of the ownership records
- Issues and aspiration of the residents/stakeholders through informal discussions and observations.

## 5.1 Physical Features Survey

Detailed physical features surveys are the very first step towards preparing the base map for LAP. In order to carry out Topographic and Physical features survey traditional methods such as Total station survey or newer methods such as the Drone Surveys can be used. The authority should appoint qualified surveyors and staff for such data collection and its verification.

The physical feature surveys should record and map all physical, natural features and man-made structures within the LAP area and the surrounding area within a predetermined buffer identified considering the context of the LAP; generally, within distance of 500m.

### Surveys of natural features must include:

- Contours (at 50 m interval or as appropriate depending on the topography)
- Low lying areas
- Water bodies – lakes, seasonal lakes, ponds, rivers, water channels & streams, nalas, wells, water canals etc.
- Trees growth areas and other plantations, vegetation, hedges etc.

**Surveys of man-made physical features would include capturing of Built features as required for the LAP:** (Refer

Figure 5\_1)

- Built structures – buildings, boundary or benchmark stone, survey stones, agricultural bunds, fences demarcation plots, sheds, plinths, compound walls, gates, field boundaries, division boundaries, etc.
- Building use – residential, commercial, institutional, religious, industrial, station point etc.



Figure 5\_1: Existing Situation Analysis  
Source: Draft TOZ-LAP Report, AUDA

- Building type – permanent, temporary, etc.
- Utility and infrastructure – All visible features such as water tank/ kundi, bore wells, hand pumps, water taps, tube wells, water supply lines, open drains, high tension lines, electric box, electric lines, electric poles, electric transformers, light poles, telephone poles, telephone box, manholes, soak pits, drainage lines, culvert and cross drainage, cart track etc. The survey may also include underground utilities such as water supply network, sewerage network, storm water drain network, electrical network, telecommunication network, etc. as available from various departments.
- Building height and no. of floors – (note presence of basement)
- Vendor Cluster Locations
- Locations of Informal settlements- A list of all informal settlements can be prepared. Further, a detailed cross-verification of the existing status should be carried out by analyzing satellite imagery and the on-ground verification.

#### **Other Surveys**

- Transportation network –including survey of roads (kacha, pucca, paved, unpaved, asphalt roads etc.)
- Traffic count at major junctions
- Public transport survey
- Parking Surveys

#### **Acquiring Land and Revenue Records**

While preparing detailed base map for the LAP area, official land records, maps and layouts need to be collected from the concerned authority and other sources. Majority of this data should be available with the authorities/ urban local bodies from the F-Forms prepared for the respective TP Schemes falling within the LAP Area. In case where TP Scheme is not prepared, such data should have to be collected from other sources. *Refer appendix 01 for the tables showing the records and maps to be collected from different sources.*

## 5.2 Preparation of Base Map

For the purpose of initiating the process of preparing a Local Area Plan, a Base Map of the Delineated LAP Area needs to be prepared. In case preparation of LAP in an area with Final sanctioned T P Scheme, the Final Plot (FP) plan and the subsequent F-Forms shall be used as the final base Map and Land records. However, for preparation of LAP in non T P Scheme areas, the authority may engage various consultants for preparing a High- Quality Base Map with all integral layers. [Refer Appendix 2 for engagement of consultants]. After preparation of Base Map of such Non T P scheme areas, it is integral for the authority to under take the following steps:

### 5.2.1 Reconciliation (Melavni)

After the physical features survey (topography survey) and data collection, the Draft Base map is prepared with all on ground information of the survey and available land record data collected.

#### Reconciliation of Land and Property Ownership Records with Base Map

In order to prepare the Final Base map, the authority has to carry out reconciliation process after the land revenue records are updated in the Draft Base map. This process should only be done after the land revenue records are updated, as it would be an extensive process if there are changes in land records (ownership, area and shape) later.

#### Process of Reconciliation

Once accurate computer drawing of the surveyed LAP area is prepared, the individual plot and/or property records should be obtained from the appropriate authority (e.g. Municipal corporation, urban development authority and/or collectors office)

#### Reconciliation process for built up area:

Reconciliation of survey using compound wall, boundary of built up structures, fencing, plinth, shades, compound walls, gates, roads and utilities etc. as references to overlap the actual shape of the Tippan of revenue survey plot. Sometimes the Tippan boundary does not match with the boundary of property marked on the site that shows the violation of building bye laws and encroachments into the adjacent property. (Refer Figure 5\_2)

### 5.2.2 Review of Draft Base Map

After completion of reconciliation process and preparation of a Draft Base Map, the authority should review the Base Map thoroughly to check for any aberrations and missing layers and subsequently finalize the Base Map.

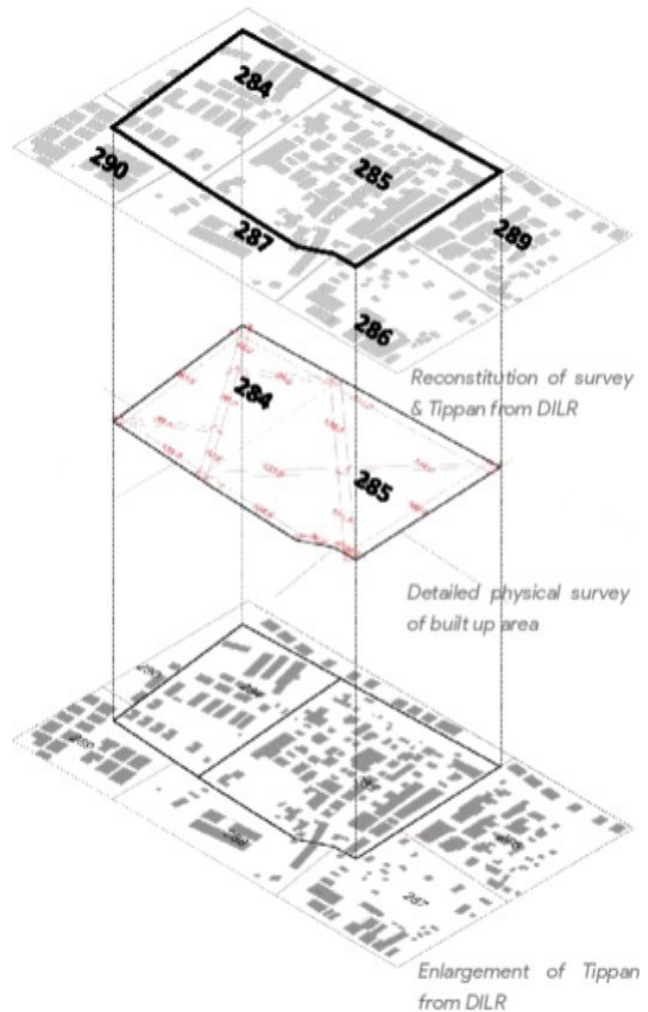


Figure 5\_2: Process of reconciliation (Melavni)



## 5.3 Finalizing the Base Map

### 5.3.1 Publication of Draft Base Map and Receiving Objections and Suggestions

Before finalizing, the Authority may decide to publish the Base Map prepared after Reconciliation (Melavni) as “Draft Base Map” along with the Ownership Records for 30 days inviting plot owners and other stakeholders by public notices to update/verify their land records.

For enabling authority to undertake updating of Base Map, the State Govt. may create Cadre post of DILR at the UD&UHD and Subsequently the Settlement commissioner’s office may appoint an Inspector of Land Records not below the rank of DILR at the UDA’s, ADA’s and other Authorities with all powers of Land Revenue Code for updating Land Records. The Authority should submit all queries and requests received for updating the land records to the Inspector of Land Records (appointed at the authority specifically for preparation of LAP) along with the Draft Base Map. The ILR should undertake the revisions required for updating the Draft Base Map and subsequently prepare the Final Base Map. This would also provide an opportunity to update the land records wherever required and enhance the accuracy of the Base Map making it consistent with the revenue records.

### 5.3.2 Preparation of Final Base Map

After making the required revisions in the Draft Base Map and the Land Records, the Base Map should be referred to as the “Final Base Map”. The Authority after review by the advisors may Freeze the Final Base Map along with the Land Records for all subsequent stages of preparation of LAP.

## 5.4 Publication of LAP Boundary

The Authority for the purpose of declaring its Intention to prepare the LAP should “**Publish the Delineated LAP Boundary**” in the official Gazette as required under section 76-A( 2) of the GTPUDA. In case the Delineated LAP Boundary is not a part of a Sanctioned Preliminary T P Scheme, the authority should take prior permission from the state Government before Publishing the LAP boundary in the official Gazette as required under section 76-A( 2).

*Page Intentionally Left Blank*

Stage  
Preparation of  
Draft LAP **2**

**06.**  
Existing Situation Assessment

---

- 6.1 Analysis of Existing Land Use
- 6.2 Analysis of Land Ownership
- 6.3 Analysis of Building Use and Building Condition
- 6.4 Analysis of Transportation Network
- 6.5 Analysis of Infrastructure (Physical and Social)
- 6.6 Analysis of Topography, Environmental Features
- 6.7 Analysis of Informal Activities
- 6.8 Analysis of Property Rates - Jantri and Market

**Highlights**

- o Careful existing situation analysis is crucial for ease of preparing and implementing a well planned LAP. This chapter provides recommendations for such Existing Situation Analysis.

In order to understand the LAP area, various other surveys are required to be conducted along with related data collection. Thematic Maps are to be prepared from these surveys and data collected to further analyze the area and represent it properly. This entire process of surveys and preparation of thematic maps should be done parallel to the updating of records after the Draft Base Map is prepared.

Thematic maps for the analyzed data should be prepared for better understanding of the area and for developing proposals. Maps of Existing features such as landuse, building use, building condition, land ownership, Infrastructure, Transport network, Informal activities, Jantri rates etc. Further, the sections should elaborate on the preparation of maps and analysis of data.

## 6.1 Analysis of Existing Land Use

Topographical surveys and observation-based surveys should be carried out in order to capture the topography and current Land Use of the area.

The Land use survey should identify lands being used as: Agricultural, Gamtals, Residential, Commercial, Industrial, Institutional, Recreational, Water bodies, Amenities, Roads/circulation, Wasteland, and Vegetation, informal settlements, etc. (Refer Figure 6\_1)

The captured and analyzed data should be showcased in form of maps and charts (pie chart, bar graph etc.) in order to identify the percentage of land under various uses.

## 6.2 Analysis of Land ownership

Data related to land records and property owners must be collected and surveys related to the same must be carried out. The authority should hire consultants or surveyors for collection of on-ground data. Map showing all public and private land must be prepared. Data should be analyzed to help the authority in making decisions about reservation land consolidation around the government land to execute large projects. (Refer Figure 6\_2)

### 6.2.1 Land records/ Property owners' surveys

- Details of property type – No. of dwelling units in each building, unit type, registered/ non-registered, private/ Co.Op. Society
- No. of owners & beneficiaries in each unit

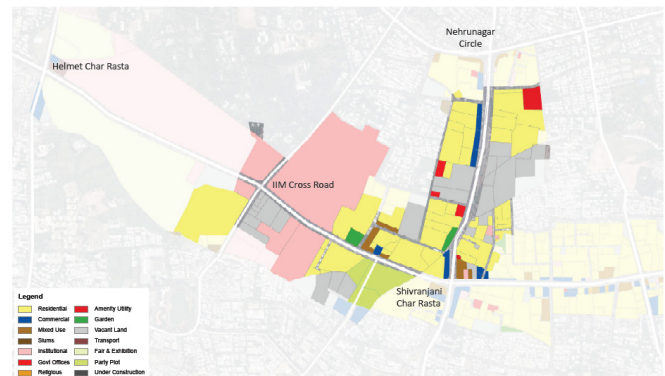


Figure 6\_1: Existing Land Use Map  
Source: Draft TOZ-LAP Report, AUDA

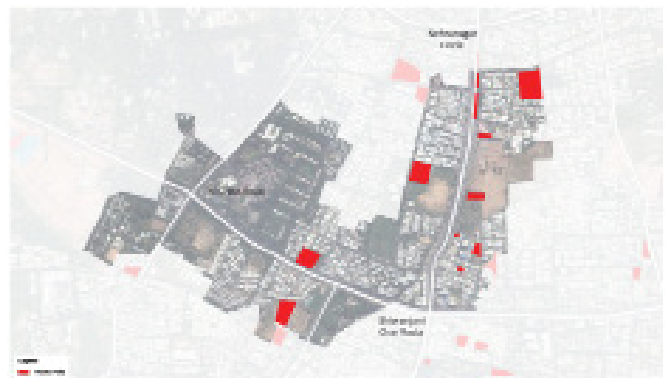


Figure 6\_2: Existing Land Ownership Map  
Source: Draft TOZ-LAP Report, AUDA

### 6.3 Analysis of Building use and Building condition

The physical features surveys should identify all the built structures – buildings/ sheds along with its shape and size in the LAP area.

The Building Use survey should identify all buildings and they must be categorized under: Residential, Commercial, Mixed, Industrial, Institutional, religious etc. (Refer Figure 6\_3)

Similarly, the condition of all buildings should be identified as: Good, Average, Poor or Dilapidated (Refer Figure 6\_4)

All existing building use and its condition should be analyzed in order to understand and establish the potential redevelopment areas.

### 6.4 Analysis of Transport Network

A Transportation Map showing all major transport nodes, Public Transport stops, Public transport Routes, Road connectivity, Road Hierarchy etc. should be prepared. This helps the authority in making decisions about land reservation for stops, creation of plazas and new road network. Also, further surveys should be conducted for circulation pattern within the town planning area and beyond the scheme boundary.

A Map capturing the circulation of the LAP should be prepared. (Refer Figure 6\_5) The Circulation Plan should capture all:

- Road and street network
- Public transport network
- IPT location
- Traffic circulation and Traffic counts at major junctions
- Types of Parking such as formal and informal, on-street and off-street parking
- Parking survey at peak time & weekdays & weekends
- All the roads which are proposed in the DP and TP; which have been implemented or yet to be implemented can be recorded.

This helps authority in making decisions about block size, street network and pedestrian priority streets.

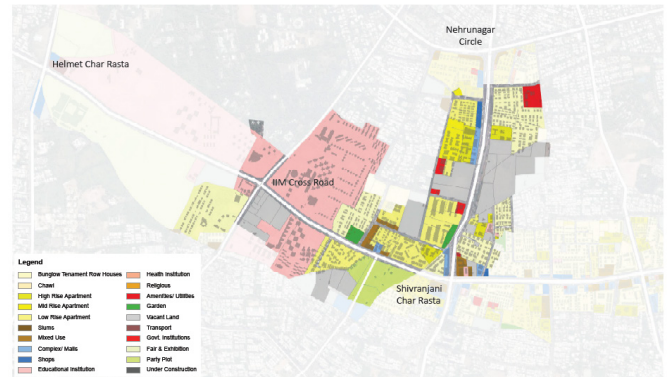


Figure 6\_3: Existing Building Use Map  
Source: Draft TOZ-LAP Report, AUDA

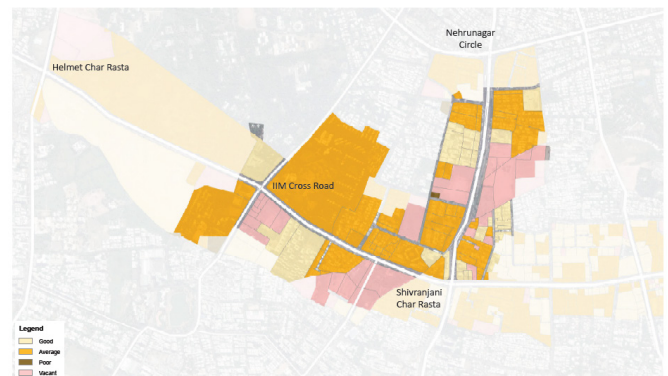


Figure 6\_4: Existing Building Condition Map  
Source: Draft TOZ-LAP Report, AUDA



Figure 6\_5: Existing Transport Network Map (AMTS, BRTS, MRTS)  
Source: Draft TOZ-LAP Report, AUDA

## 6.5 Analysis of Infrastructure and Amenities

All existing physical infrastructure – both underground and above ground should be surveyed and mapped. The map should include all the physical features as well as underground utilities. These should include features related to:

- Water supply
- Sewerage
- Storm water
- Solid waste
- Electricity lines (HT lines) and stations
- Telecom lines and OFC network
- Oil and gas lines

After clear mapping, an assessment of existing demand and load on the networks should be carried out. Also an assessment of per capita consumption of water and production of sewerage and solid waste should be made. Subsequently, this should be compared with the Service Level Benchmarks (SLBs) as appropriate and gap in provisions, network coverage, service delivery should be identified. This should help in identifying the need and requirements for improvements in the area.

Along with physical infrastructure all existing social amenities in and around the area must also be surveyed and mapped. These should include all social amenities such as education facilities, health facilities, police stations, fire Stations, other city level open spaces and recreation areas etc. within the LAP area and in the buffer of 1 km beyond the LAP boundary. Also this should be compared with the relevant guidelines and benchmarks such as URDPFI guidelines in order to identify additional provisions of the amenities to be made in the area. (Refer Figure 6\_6 and 6\_7)

Along with mapping of physical infrastructure and social amenities, the following should also be mapped and studied:

- Ongoing and proposed projects in the area and in the close proximity.
- Recent and upcoming development in the LAP area and the surrounding areas which can impact the provision of infrastructure and amenities.
- Provisions made in the LAP, T.P. Scheme of the surrounding areas.

The survey, mapping and study of the physical infrastructure and social amenities as indicated above should help the authorities in making decisions in terms of



Figure 6\_6: Existing Social Amenities (Parks and Garden)  
Source: Draft TOZ-LAP Report, AUDA

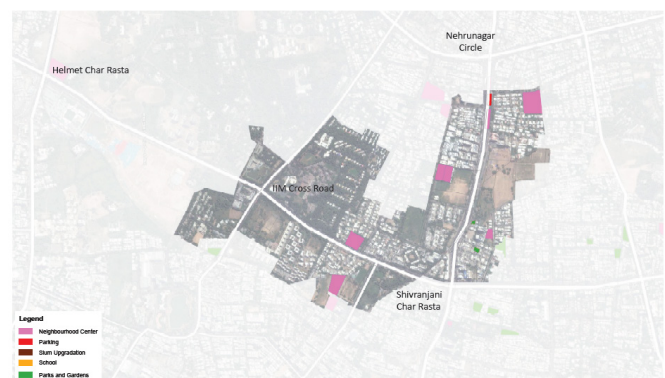


Figure 6\_7: Existing Social Amenities (Public Purpose Plots)  
Source: Draft TOZ-LAP Report, AUDA

identifying and appropriating land for infrastructure and social amenities.

## 6.6 Analysis of Topography, Environmental Features

Due to the contours on land surface, when the rain falls; water run following the slopes in small rivulets. These rivulets form small streams and merge to form bigger streams, finally merging with the larger water bodies like rivers, lakes etc. The entire area that serves water to the larger water body is called the watershed of that particular water body. Watersheds can also be called catchment area or drainage basin. Protection and conservation of watersheds are necessary for conservation of streamlines, water bodies, groundwater recharge and control soil erosion and preventing soil degradation.

Watersheds and land use are interdependent. When build-forms consume the land; contours change, flow of stream lines are obstructed and ground is covered with impermeable surfaces. Due to the changes in the natural state; there arises situations of floods, drying of water bodies, and decrease in groundwater levels. Thus, planning and development of watersheds becomes important. These are major reasons for urban floods and adverse environmental impacts in our cities:

- Urbanization increases impervious surfaces, decreasing the water percolation and increasing the water runoff.
- Further filling up of water bodies leads to drastic decrease in water infiltration or storage of surface water.
- The inefficient infrastructure which is incapable of handling heavy rains and its runoff.
- The unhealthy land use which may pollute the water runoff.

Study of the following is necessary for efficient planning and development:

- Topography and terrain profile – Contours map
- Infrastructural supplies and demands
- Identifying conflicting land uses

A watershed analysis map, which should help in drafting the LAP proposals, has to be prepared after considering the above studies. A Topography Map should be prepared to analyze the geographical context of the LAP. The Topography Maps and the slope studies should majorly capture all contours in the delineated LAP. This helps authority in making decisions about road alignments, conservation of eco sensitive land and storm water

network proposals. The map should indicate areas to be preserved while preparation of proposals for the LAP.

## 6.7 Analysis of informal activities

An Informal Activities Map should be prepared to document all major vending zones and types of activities to analyse the vendor behaviour. All Potential vending zones should also be identified in the informal activities map. This helps the authority in making decisions about creating spaces for informal activities by either reserving plots or accommodating in the street section. (Refer Figure 6\_8)

## 6.8 Property Rates – Jantri & Market

A Map capturing the land rates in the delineated LAP area should be produced considering the Jantri rates. This helps authority in making decisions about allocation of reserved land for optimizing value capturing.



Figure 6\_8: Existing Informal Activities Map  
Source: Draft TOZ-LAP Report, AUDA



# 07.

## Planning and Design of LAP

- 7.1 Stakeholder Consultation for preparing Vision and Concept of LAP
- 7.2 Identifying Purpose and Vision for LAP
- 7.3 Identifying Key Planning and Design Principles for LAP
- 7.4 Preparation of Schematic Layout
- 7.5 Envisioning Areas with Different Urban Character and Built Form
- 7.6 Guidelines for Street Network Planning and Design
- 7.7 Guidelines for Integrating Informal Activities
- 7.8 Guidelines for Preparing Parking Management Plan
- 7.9 Guidelines for Providing Physical Infrastructure
- 7.10 Guidelines for Open Spaces, Network of Green Spaces and Waterbodies
- 7.11 Guidelines for Locating Social Amenities

### Highlights

- *LAP is not an exercise of land redevelopment, but it must be planned to create vibrant, livable, sustainable neighborhoods and developments consistent with the vision and purpose of the LAP and the broader level Development Plans.*
- *The LAP layout must therefore be prepared after understanding the context and envisioning the urban character and built form that may emerge upon its implementation.*
- *This chapter provides detailed guidance regarding how to integrate street network design, locating physical infrastructure, social amenities, parks and open spaces, parking management, Informal activities, EWS housing etc while preparing a comprehensive LAP layout.*

## 7.1 Stakeholder Consultation for Preparing Vision and Concept of LAP

Before identifying the Vision and preparing the conceptual LAP, the authority should carry out consultation meetings with various stakeholders. (Refer Figure 7\_1 And 7\_2) These consultation meetings are important for recording inputs from relevant state and local government departments. Based on their relevance various departments such as urban development and housing, roads and building, Health, cultural activities, forest and environment, Climate change, transportation, infrastructure works, civil works, Fire safety, heritage conservation, irrigation, etc. may be potentially communicated for receiving their inputs.

The authority may also conduct surveys of land owners and beneficiaries as part of consultations to understand issues faced in the areas. If necessary, the authority may also conduct Focused Group Discussions (FGD) with different socio-economical groups to understand the issues and requirements from their area.

The relevant information collected from both the government and non-government stakeholders will immensely help in formulation of the Vision and concept for the LAP.

## 7.2 Identifying Purpose and Vision for LAP

Every local Area Plan should be prepared to achieve a clear vision for the area. (Refer Figure 7\_3) Such a vision must be primarily defined based on two key deliberations; Firstly, the **Purpose** of the LAP and secondly, the inputs of different **stakeholders** of the LAP (both the community and the government). If planned with clear purpose and vision, LAP have potential to create much better urban environments, contributing to the overall city context and developing their own urban character and form.

The **purpose** of the LAP can be defined as the reason or intent for which the LAP needs to be done for a particular area utilizing its full potential such as to plan as CBD, for TOD, for heritage, for densification of low-density mixed use area etc.

The inputs of the stakeholders can be derived after consultation with various government departments (as explained in section 7.1), in-depth surveys and assessment of the planning area, and inputs from the owners, residents and stakeholders using different methods, which range from informal discussions, surveys and/or focus group discussions to participatory workshops.



Figure 7\_1: Stakeholder's Consultation on proposed LAP Layout



Figure 7\_2: Stakeholder's Consultation on LAP



Figure 7\_3: 3d Visualisation of CBD's Vision

Source: Ashram Road, CBD-LAP, AUDA, Prepared by HCPDM

For the LAP to be able to implement the identified purpose and the stakeholder's aspirations, a clear vision for a LAP should be defined such as "the LAP area should be a world class CBD", "it should be a multi-modal TOD area", or "a local sub-urban TOD with some character & form". Subsequently, a clear conceptual map (2D/3D) should be prepared to illustrate the vision in the spatial manner of the area. (Refer Figure 7\_4 and 7\_5) Such vision and purpose should be derived based certain considerations such as the planning context provided through the Development Plan, the location and development potential of the area, topography and natural features within the area and other such considerations.

Some considerations for arriving at such purpose and vision should include the following:

- **Planning context:** This is provided by the Development Plan, which should reflect the overall vision for how the LAP area and its surroundings are expected to develop. This is reflected through zoning, regulations, road network and various proposals in the DP which should be integrated within the LAP
- **Development potential:** Vision for any plan must consider the development potential for the area for it to be viable and realizable.
- **Area specific needs:** Vision for a LAP should reflect the specific needs of the area
- **Envisioned urban form and urban environment:** A clear visualization of the urban form and urban environment to be developed within the LAP area is crucial for it to successfully attract desirable developments, and meaningfully contribute to the overall development of the city. Such vision should not only envisage the overall built-form from bird's eye view, but also envision life on streets and public spaces and the interactions between streets and surrounding built-forms resulting from the proposed DCRs.
- **Topography and natural features:** The vision of LAP should integrate any significant topographic and/or natural features within the area or in immediate context. Natural features such as large waterbodies, wetlands, and bio-diversity areas, forest areas in or near the LAP should be reflected in the vision, which should offer to protect them, and at the same time leverage their potential for eco-tourism or other such environmentally sensitive activities.

Based on the above considerations the authority preparing the LAP should clearly identify the vision for the area.

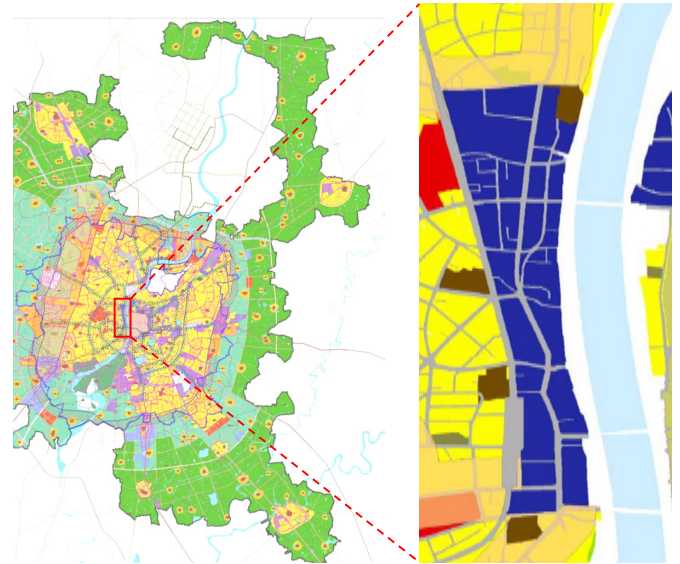


Figure 7\_4: Identifying CBD as Special Provision/Project in DP  
Source: Ashram Road, CBD-LAP, AUDA, Prepared by HCPDM



Figure 7\_5: Urban Form Visualisation for TOD Corridor  
Source: Draft TOZ-LAP Report, AUDA, Prepared by HCPDM

## 7.3 Identifying Key Planning and Design Principles for LAP

Once the purpose and vision are clearly identified, a set of clear principles must be identified for each LAP. Such principles should clearly identify the priorities for the LAP based on its purpose and vision. For example, below are some such principles, which may be identified before preparing a LAP layout. It is important to understand/keep in perspective that the LAP is prepared for people and not for automobiles. Therefore it must take people-centric approach and not automobile-centric approach. Too often it is assumed that the purpose of LAP is to reduce congestion by easing the automobile movement. But it is important to remember that the city is for people and not for cars. Therefore, purpose of LAP should not be to remove congestion but to improve mobility for people allowing more human interaction and creating more livable and economically vibrant environment well served by amenities and infrastructure.

- Ensure coherence with the zoning of the Development Plan with the laying out or relaying out of land, either vacant or already built upon, the filling up or reclamation of low-lying, swampy or unhealthy areas, or levelling up of land.
- Ensure continuity of the citywide network of roads with Lay-out of new streets or roads, construction, diversion, extension, alteration, improvement and closing up of streets and roads and discontinuance of communications
- Ensure walkable network of streets within the LAP area
- Ensure the new construction, alteration and removal of buildings, bridges and other existing structures.
- Preserve the key environmental features including all waterbodies, streams and nalas.
- The preservation of objects of historical or national interest or natural beauty, and of buildings.
- Ensure ground water recharge while planning for storm water management system
- Ensure a network of gardens, open spaces and green streets to maximize green cover
- Create a livable, walkable neighborhood with a vibrant commercial center.
- Create pedestrianized main-street with street light to serve the neighborhood as key retail and Commercial Street.
- Ensure the allotment or the reservation of land for roads, open spaces, gardens recreation ground,

schools, market, green belts, transport facilities, public purpose of all kind, school, dispensary, fire brigade, and public utility places.

- Ensure provision of high-quality water and sewage infrastructure that is easy to operate and maintain, through provision of utility ducts along the streets

These planning principles may vary from LAP to LAP as every scheme may have different purpose and vision.

## 7.4 Preparation of Schematic Layout

After identifying the purpose and vision, and subsequently defining key principles for a LAP, the next step is to prepare a schematic layout for the LAP. (Refer Figure 7\_6) It is important that Holistic and integrated concepts are formulated to solve problems, exploit opportunities and fulfil aspirations in a creative, iterative process while preparing the LAP. Often, the layout of streets and open spaces is a very useful starting point for this exercise, followed by built form, use mix and supporting infrastructure.

The importance of designing the public domain cannot be overemphasized during this process. LAPs are opportunities to rectify the planning mistakes that have made our cities chaotic and unlivable. The essence of the city is experienced in the public domain, the streets, open spaces, public transport and public facilities. A discernible change in quality of life can be brought about rapidly for all classes of citizens by improving the public domain. Therefore, the entire LAP area should be laid out to maximize access to public transport and facilitate walking and cycling.

To achieve predictable and desirable built form, the development control regulations should be reworked based on Form Based Regulations. The built form should be designed to achieve multiple objectives – high density mixed land use to reduce and shorten trips, additional development rights to raise revenue from value capture and consistent form for harmonious living environment.

It is at this stage that all the key planning and design principles identified for the LAP should be applied to prepare the schematic layout of LAP. Such schematic layout should be prepared using the base map with topographic survey as a base. The Schematic Local Area Plan should identify the following:

- **Areas with different Urban Character:** All areas within the LAP which are envisioned with a specific urban form and character along with plausible options of the envisioned built form through 3D/2D graphics (Refer chapter 7.5 for detailed guidelines)

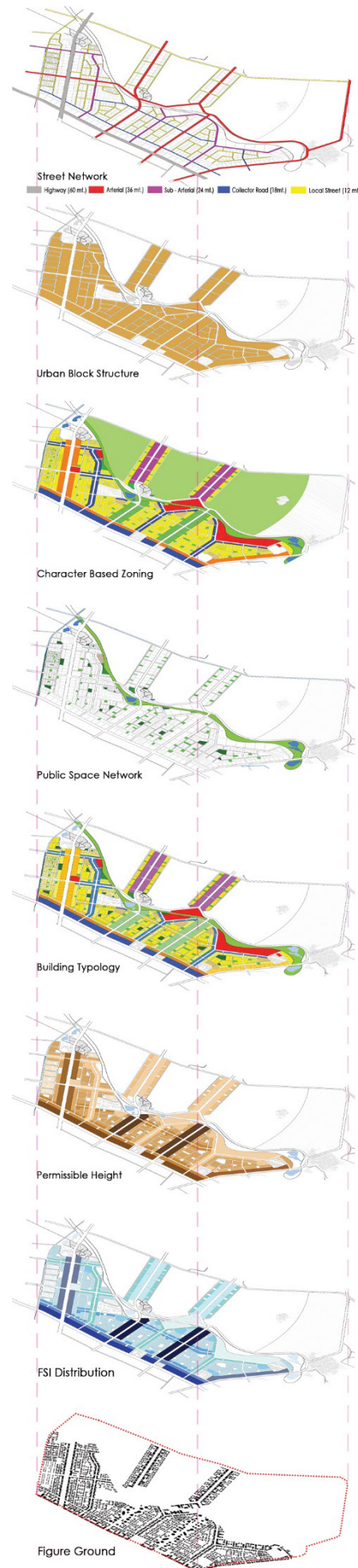


Figure 7\_6: Schematic Layout of Proposed LAP

Source: Adopted from Student's Work, M. UD, CEPT University

- **Proposed Street Network:** The proposed street network with layers identifying ROW and street typology based on functional hierarchy and circulation along with the Schematic street sections for the street typology identified in the proposed street network. *(Refer chapter 7.6 for detailed guidelines)*
- **Integrating Informal Activities:** Identifying the informal vending hotspots and organizing them to integrate within the ROW design or on a dedicated vending space by undertaking a detailed vending management plan. *(Refer chapter 7.7 for detailed guidelines)*
- **Parking management:** Identifying the Informal parking (both on-street and off-street) and organizing them integrate either within the ROW design or on a formal parking facility. *(Refer chapter 7.8 for detailed guidelines)*
- **Physical infrastructure:** including layouts for water, sewage, storm water, electricity and gas network, and network of utility ducts to carry such infrastructure. *(Refer chapter 7.9 for detailed guidelines)*
- **Green and Open space Network:** Existing natural features to be retained and enhanced. Green network of proposed gardens, open Spaces, green streets and other green spaces and natural features. *(Refer chapter 7.10 for detailed guidelines)*
- **Social Infrastructure:** Public amenities including civic center, healthcare, library, fire, police, etc. *(Refer chapter 7.11 for detailed guidelines)*

The schematic layout should be supplemented by draft **Regulations to achieve the envisioned urban form and character** in the specified areas. This is also the stage at which strategies for value capture from additional development rights are explored.

## 7.5 Envisioning Areas with different Urban Character and Built Form

LAPs are intended to have a strong focus on urban design and therefore this stage of work is extremely important to the success of the LAP. Having prepared base maps and databases, having identified issues and opportunities in consultation with stakeholders, the planning and urban design team should conceptualize the layout and built form of the LAP area. (Refer Figure 7\_7, 7\_8, 7\_9) Conceptualizing the built form should go hand in hand with conceptualizing proposals for all sectors including infrastructure augmentation.

Based on the context and identified vision of the area for LAP, it is essential to perceive the character for the builtform to enhance the experience of the public realm in the identified LAP Area. Experience of the public realm is primarily characterized by two major elements.

- The builtform surrounding the public spaces acting as enclosure of the public realm; and
- The Placemaking of streetscape including the R.O.W. Designs, junctions, Nodes, plazas, network of open space integrating the formal and informal spaces.

The Schematic layout should clearly identify areas with different urban character envisioned within the LAP Areas. Various factors such as connectivity with major urban arterials or metro station, proximity to lakes or waterbodies or parks, type of demand within the area, desirable urban form and landscape design etc. can be considered while delineating such areas. However, it is not necessary for all LAPs to have areas with different urban characters as in many cases the whole LAP may have a single type of development.



Figure 7\_7: Example of Envisioned Urban Character for the LAP area  
Source: <https://www.flickr.com/photos/nycstreets/34384838435/in/album-72157681789316745/>



Figure 7\_8: Example of Envisioned Builtform & Public Spaces for the LAP area  
Source: <https://www.pps.org/article/you-asked-we-answered-6-examples-of-what-makes-a-great-public-space>



Figure 7\_9: Example of Envisioned Builtform for the LAP area  
Source: Adopted from Student's Work, M.U.P., CEPT University

## 7.6 Guidelines for Street Network Planning and Design

For an LAP to be able to create vibrant and livable urban environment, enhancing the existing street network is a critical requirement. This enhancement of the existing street network should be done for improving the overall connectivity, accessibility, street hierarchy and walkability within the LAP area. This can be achieved by adding new streets, widening existing street ROWs, improving the existing street design, adding pedestrian and NMT connections.

### 7.6.1 Key Considerations

Below are some key considerations while preparing street network layout for LAP:

- **Integrate DP Roads:** The proposed street network should be accommodated for a careful integration of all Proposed DP Roads in case they are not yet realized on ground within the LAP area.
- **Improve connectivity:** The proposed street network should enhance the existing street network to improve its connectivity with its surrounding areas. It should also improve connectivity to important nodes within the LAP area.
- **Improving the Street hierarchy:** The proposed street network should be planned to have clear hierarchy. A clear hierarchy of streets to ensure smooth movement of traffic and smooth transition in development character within the area. For example, small local residential streets directly opening on major ROW with high traffic volumes may cause unsafe situation at the intersection for the residents.
- **Improve walkability and NMT:** The proposed streets network should prioritize walkability and use of NMT by reducing Block sizes and adding more pedestrian and NMT streets into public domain. For example, the LAP prepared for a commercial district or CBD should have small walkable block sizes and wide streets with wide sidewalks to accommodate pedestrian related activities. Also LAPs (for TOD) should propose higher densities along public transport corridors to facilitate transport, reduce congestion, reduce dependability on private transport and optimize investments in transport infrastructure. Therefore, it becomes imperative to create a good walkable street network and environment. This would encourage people to walk and then eventually help them shift from private mode of transport and use public transport.
  - > **Walkable Blocks:** Walking is the most basic and universal mode for humans to move from one place to another place. Everyone is a pedestrian first before they take any other mode for

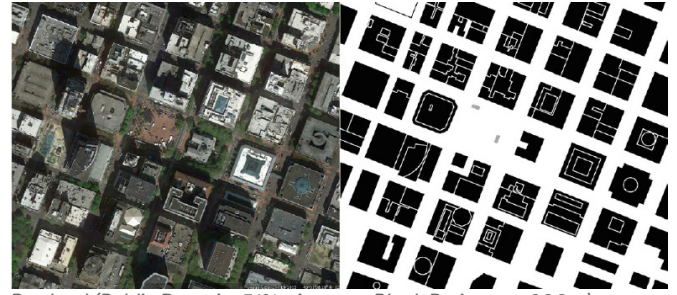


transport. Walking is also the most sustainable mode of transport. Therefore walkability needs to be the first and primary focus while planning any urban area. For an area to be walkable it is crucial for it to have walkable street network and block sizes. Based on the observations and experience in the cities across the world, typically a walkable block length along a street is about 100m. Which means, to create pedestrian friendly environment the street network needs to allow intersections at almost every 100 – 150m. Considering this, an average block perimeter of about 400m is considered to be walkable block size. For example Portland Block of 200 ft (about 70m) with perimeter of about 265m are extremely walkable. (Refer Fig 7\_10)

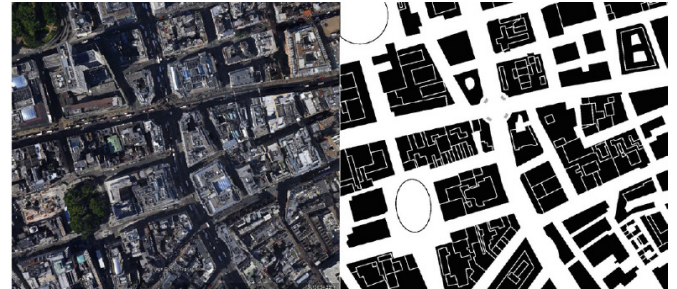
- > **Area in Public Right-of-Way:** In addition to the block size, the amount of area under public right-of-way also influences walkability. More area under the public right of-way means more area available for public activities such as walking, sitting, pausing, meeting, gathering, shopping etc, in addition to the area required for vehicular transport. Typically, compact, mixed use areas should have more area in public right-of-way. For example, San Francisco downtown area has almost 50% area within public domain. (Refer Fig 7\_10) It is recommended to have at least 20% of total LAP area under street ROW. This can also go higher depending on the types of development envisaged. For example, a CBD could need as high as 40% area under street ROW to accommodate dense network of wider streets to accommodate small walkable blocks and wide sidewalks.

- **Block size and street width to reflect character of the LAP:** It should reflect the purpose and character of the LAP. For example,
  - > LAP prepared for a commercial district or CBD should have small walkable block sizes and wide streets with wide sidewalks to accommodate pedestrian related activities. (Refer Fig 7\_11)
  - > LAP for calm residential neighborhood should have small walkable block sizes, but relatively narrower streets and sidewalks with shady trees and street furniture. (Refer Fig 7\_11)
  - > LAP for large scale commercial, wholesale and logistics district should have large block sizes` with wide streets and vehicular lanes to carry heavy vehicles. (Refer Fig 7\_11)

In all cases, **dead ends or cul-de-sacs should be avoided** in the street network layout, as they reduce overall connectivity and walkability within the area.



Portland (Public Domain: 51% ; Average Block Perimeter: 300m)



London (Public Domain: 40% ; Average Block Perimeter: 500m)



San Francisco (Public Domain: 50% ; Average Block Perimeter: 300m)

Figure 7\_10 : Examples of Walkable Urban Block and Street Network  
Source: HCPDM

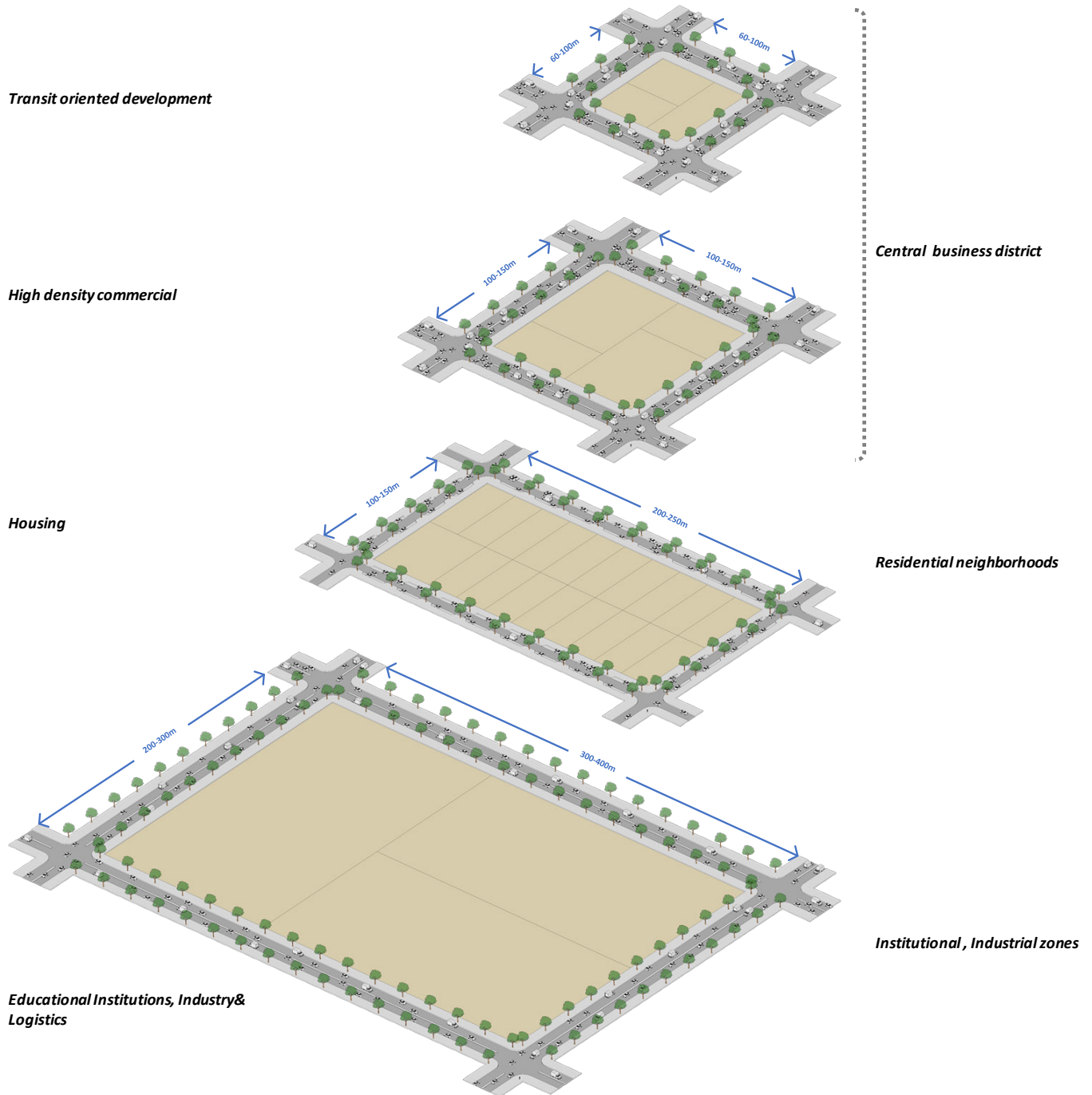


Figure 7\_11: Comparative Diagram for Different Block sizes corresponding to different uses

- ROW Design:** The proposed street network, especially in an LAP should aim to give a high precedence for improving the street environment through Design of ROW. The importance of designing the public domain cannot be overemphasized. The essence of the city is experienced in the public domain, the streets, open spaces, public plazas, public transport and other public facilities. A discernible change in quality of life can be brought about rapidly for all classes of citizens by improving the public domain. Therefore, the street network should be laid out with careful Design of its ROW to achieve a coherent, livable and vibrant urban environment. (Refer Fig 7\_12)

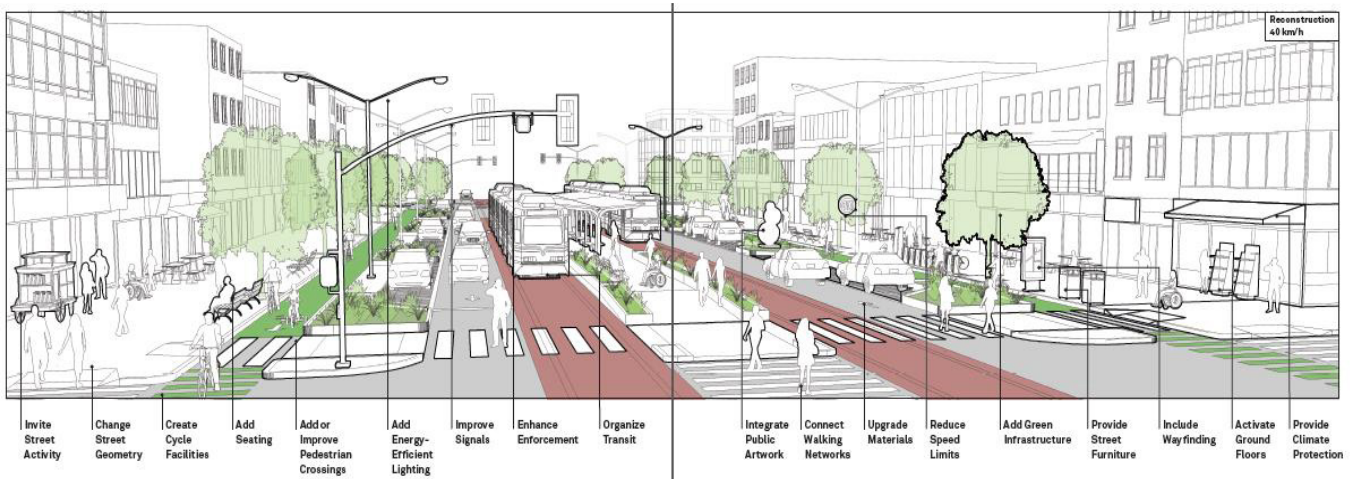


Figure 7\_12: Examples of Multimodal Street  
Source: Global Street Design Guide, NATCO

## 7.6.2 Guidelines to Improve the Street Network

Improving the walkability, connectivity and accessibility can be achieved through an improved street network layout. This will require adding new streets, widening existing streets or enhancing the existing streets. It is challenging to change/improve the existing street network in an existing developed area. This requires very careful surgical approach considering the existing plot patterns, ownerships, redevelopment potential etc. to identify the interventions. This process will also require prioritizing the interventions considering the redevelopment potential, feasibility and ease of implementation. It is much simpler to plan a new area that will have nice, walkable block sizes. However, when it comes to improving the block sizes and increasing the area in public right-of-way in currently developed area, without forceful acquisition of private land, it demands a very detailed, careful and long term approach.

In order to improve the street network in the already developed area, it is crucial to first carefully study the existing street and block pattern, and the existing development patterns; and seek opportunities to add new right-of-ways that would reduce the block sizes. The following exercise illustrates this conceptual approach in a series of steps that would make it implementable without forcibly taking the land from private owners through acquisition. This innovative approach shows a way to create a win-win situation for both, the authority and the private owners.

### Step 1: Mapping the existing blocks

- This particular exercise will provide the information regarding the on-ground existing scenario to draw and refine the street grid eventually reducing the perimeters and area of existing urban blocks. (Refer Figure 7\_13, step 1)



## Step 2: Adding roads from DP and TP which do not exist on ground

- This step will assess the existing condition and the proposed roads from the sanctioned development plans, if there are any missing/unimplemented Roads, authority should identify such roads and add them in public domain.
- Apart from development plan proposal if the undertaken area has T.P. Scheme in place, authority should review the identified street network under the TP Scheme and if there are any missing/unimplemented Roads, authority should identify such roads and add them in public domain. (Refer Figure 7\_13, step 2)



Step 2: Adding roads from DP map which do not exist on ground

## Step 3: Adding existing private roads

- To further improve walkability and increase road area under public domain, some interventions are proposed under walkability exercise. Step 3 is converting existing private roads into public roads. This intervention include roads which are already in existence, thus it is convenient to convert these roads into public ROW. (Refer Figure 7\_13, step 3)



Step 3: Adding existing private roads

## Step 4: Adding new roads through margin and open spaces

- To further break the existing large blocks into walkable blocks and improve street network, the next step identifies the streets from open spaces and marginal area of the private plots.
- These streets does not include any level of small or large scale demolition. (Refer Figure 7\_13, step 4)



Step 4: Adding new roads through margins and open spaces

## Step 5: Adding new roads requiring redevelopment

- For the plots which are still very large in size and are essential to split for through connectivity, addition of new streets are proposed which requires future redevelopment of plots. The road area will be taken under public domain only when the plot undergoes redevelopment. Also, these roads are strategically located on the map so that it does not divide the plot in an undevelopable manner nor decreases its market value. Most future roads are proposed along plots lines. (Refer Figure 7\_13, step 5)



Step 5: Adding new roads requiring Redevelopment

**Step 6: Final Proposed Blocks and Street Network**

- With the help of the walkability exercise, the existing area under public ROW can be increased by adding new streets within the LAP area. It improves walkability of streets by splitting the existing large blocks to smaller walkable blocks. (Refer Figure 7\_13, step 6 and Figure 7\_14)

The approach identified above should be applied, while redevelopment is undertaken in identified LAP site to improve its walkability.



Step 6: Final Proposed Blocks and Street Network

Figure 7\_13: Steps(1-6) to improve the walkability  
Source: Draft TOZ-LAP Report, AUDA, Prepared by HCPDM

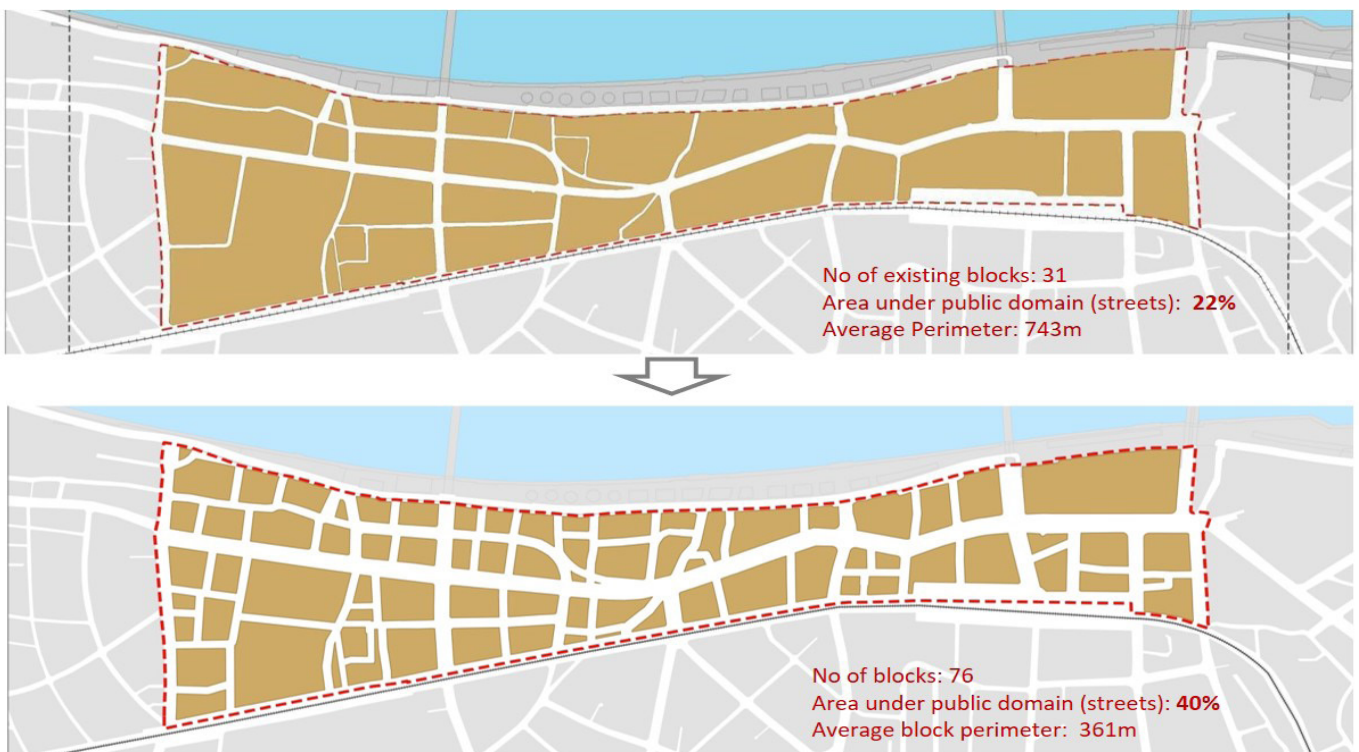


Figure 7\_14: Example of potential Transformation in Ubrna Blocks and public domain through above mentioned step by step process  
Source: Draft LAP for CBD Ashram Road, AUDA, Prepared by HCPDM

### 7.6.3 Guidelines to integrate street design

#### Complete Streets:

The street network layout should be based on the concept of “Complete Streets”, to allow safe and comfortable mobility for users of all modes including walking, cycling and public transport; and for people of all ages and abilities. (Refer Figure 7\_15 and 7\_16) The street sections for these streets must be planned to accommodate all modes and all types of users that are expected to use those streets, depending upon the type of street and the character of the area.

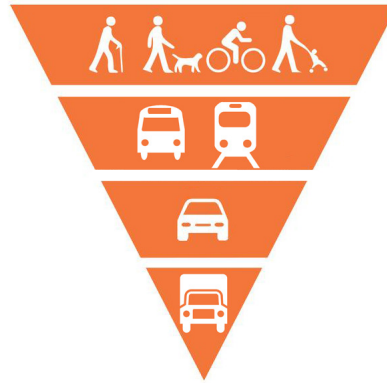


Figure 7\_15: Street priority pyramid

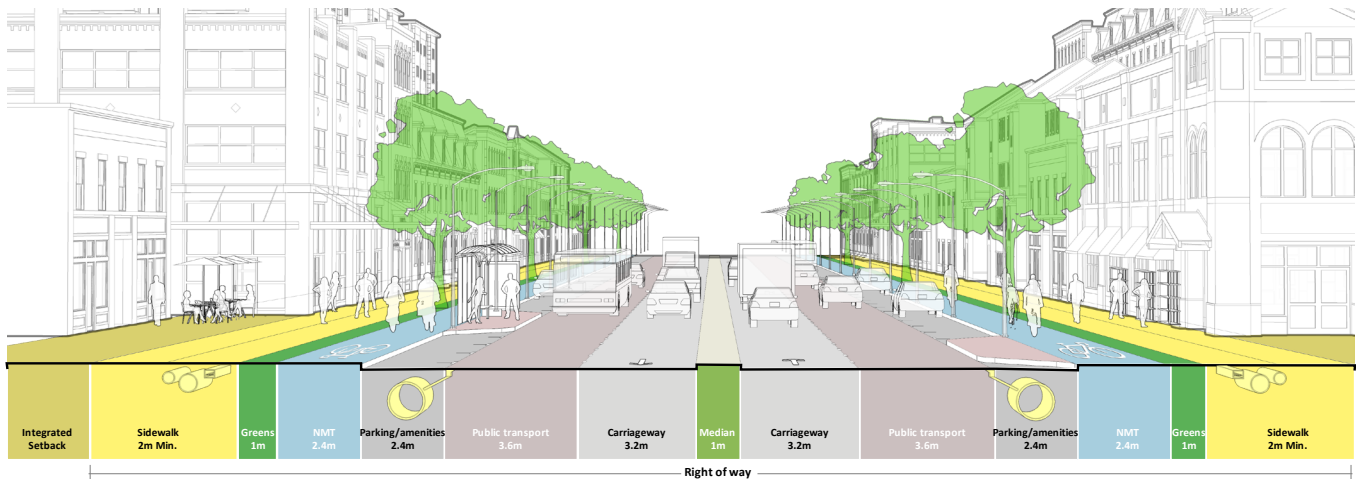


Figure 7\_16: A Sample of Complete street design

#### ROW Design:

- **Sidewalks:** A human being is a pedestrian first. All human trips begin and end as pedestrian trips, therefore all streets in a LAP must facilitate pedestrians through minimum 2m wide clear, walkable sidewalks.
- **ROW for Pedestrian-only Streets:** Only Pedestrian-only streets may have ROW smaller than 12m. However, such pedestrian-only ROW should not be less than 6m to allow emergency and service vehicle access. (Refer Figure 7\_17)
- **ROW for vehicular street:** Considering the minimum clear width for sidewalks, it is recommended that any street with vehicular access in a LAP should have minimum ROW width of 12m, and must have minimum 2m clear sidewalks. (Refer Figure 7\_18)
- **ROW for streets with on-street parking:** All streets with two vehicular lanes requiring on-street parallel parking should have minimum 18m ROW. The two-lane streets with angular parking will require minimum ROW of 24m or more. (Refer Figure 7\_19)
- **ROW for streets with four vehicular lanes:** Streets with four vehicular lanes (two lanes in each direction) and on-street parallel parking should have minimum ROW of 24m to ensure walkable sidewalks. (Refer Figure 7\_20 and 7\_21)

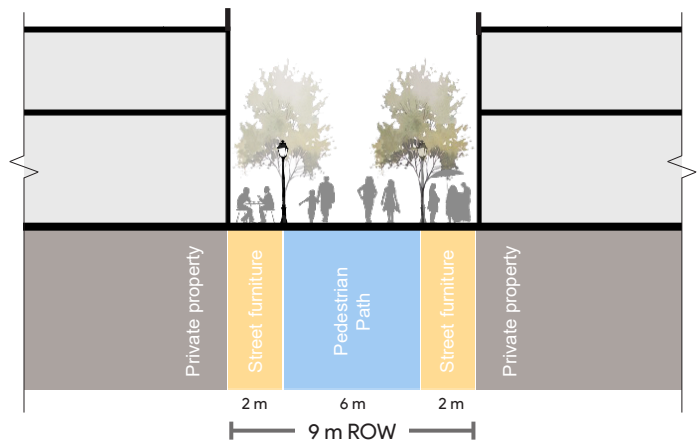


Figure 7\_17: A typical 9 mt. Pedestrian ROW Section

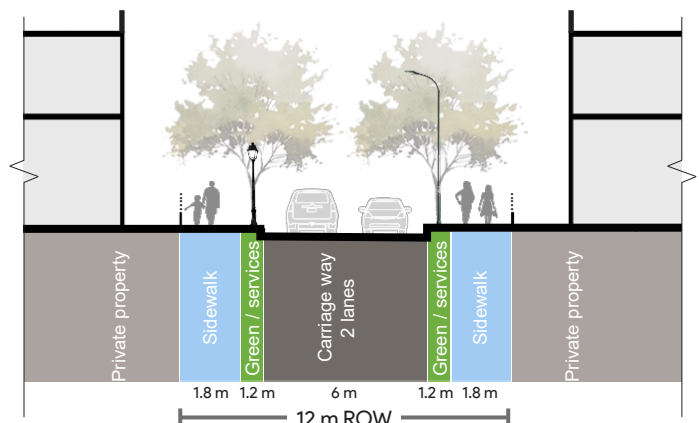


Figure 7\_18: A typical 12 mt. ROW Section

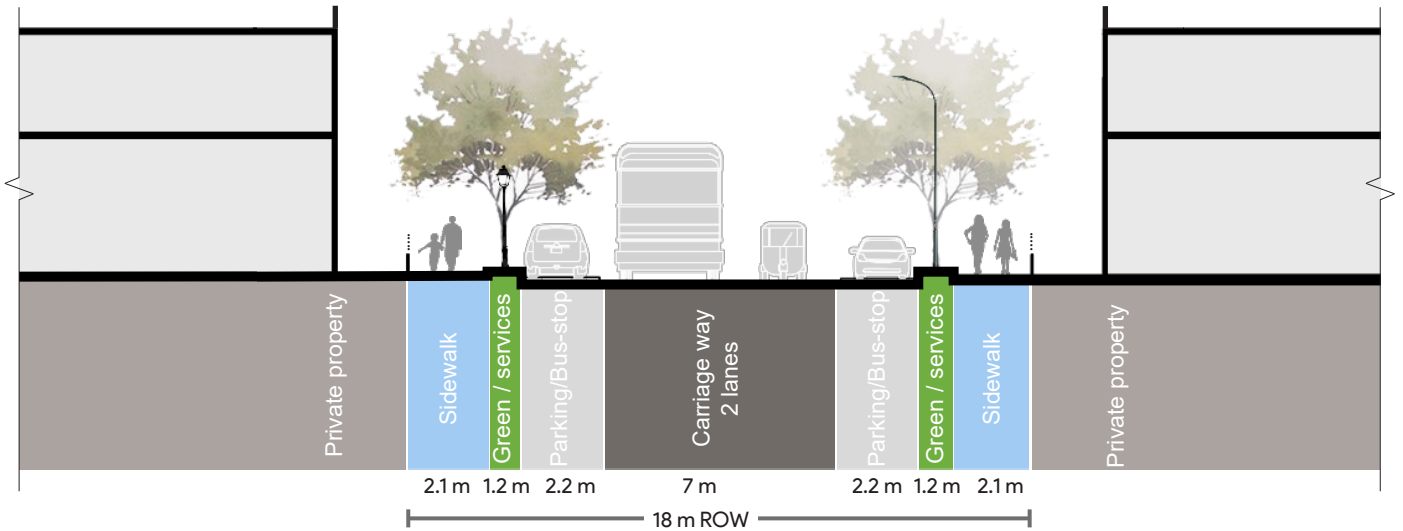


Figure 7\_19: A Typical 18 mts. ROW Section

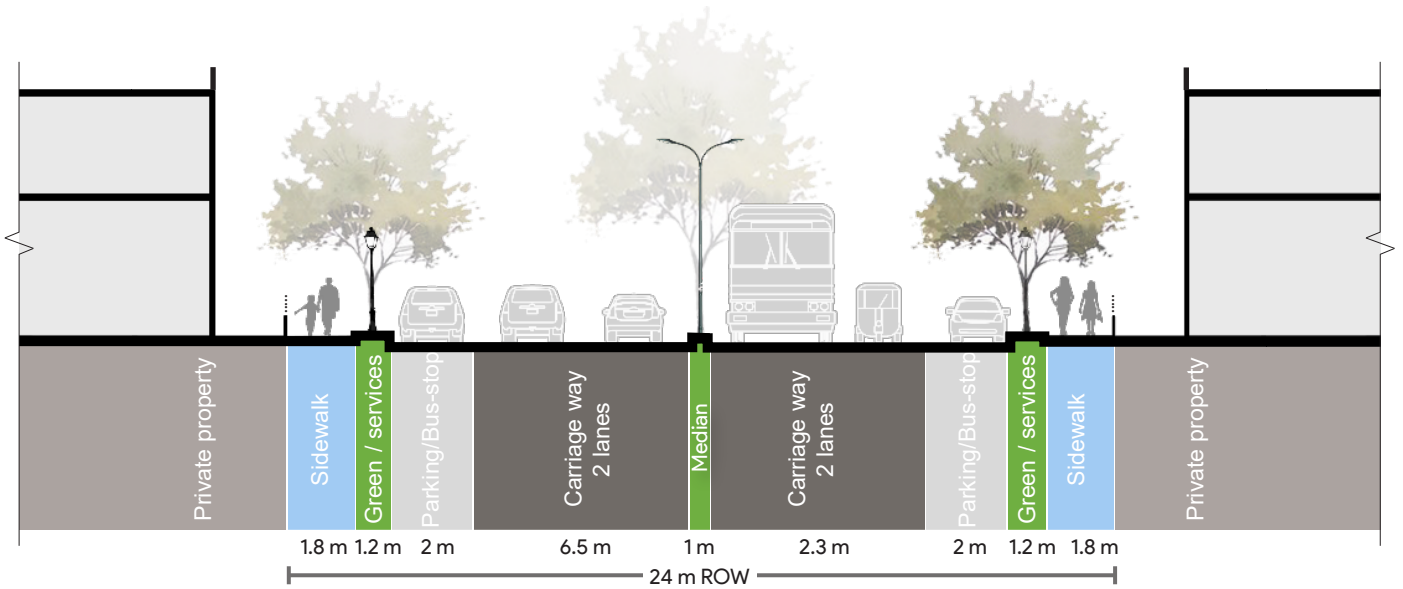


Figure 7\_20: A Typical 24 mts. ROW Section

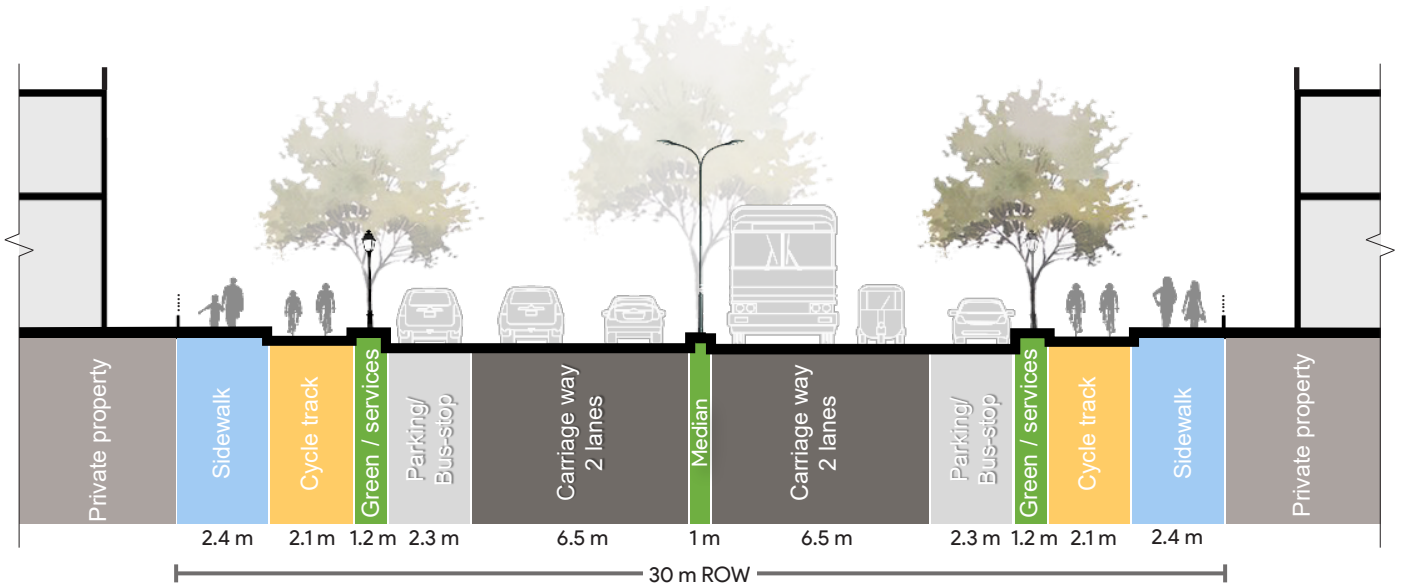


Figure 7\_21: A typical 30 mts. ROW Section

**Intersection Design:**

- **Intersection layout:** Street network layout should avoid intersections with more than four-way and with less than 60-degree angle between any two arms. (Refer Figure 7\_22(a),(b))
- **Distance between intersections:** The street layout should avoid intersections too close to each other as this will create significant traffic safety issues and cause congestion. Minimum distance between two intersections should not be less than 100m (Refer Figure 7\_22(c))
- **Corner Plot Radius:** Radius at corner of the plots at intersections should be as below: (Refer Figure 7\_22(d))

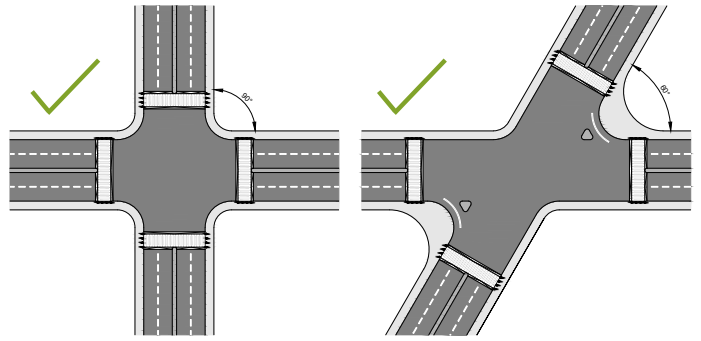


Figure 7\_22(a): Proposed Road Intersection must be between 90°-60° angle

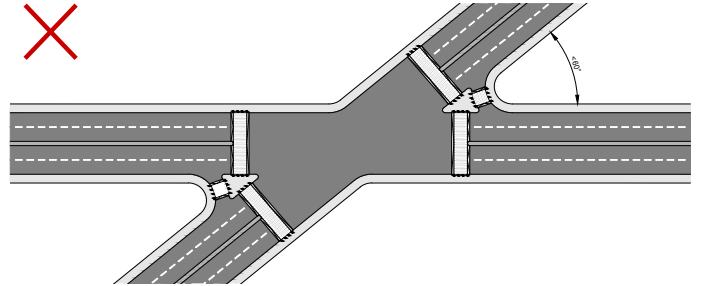


Figure 7\_22(b): Road intersection of less than 60° angle must be avoided.

Table 7\_1: Corner plot Radius

	Intersection corner Type		Plot Corner Radius (Z)
	Smaller ROW (X)	Bigger ROW (Y)	
1	12m	Bigger than 12m	3m
2	More than 12m upto 18m	Bigger than 18m	6m
3	24m or bigger	Bigger than 24m	9m

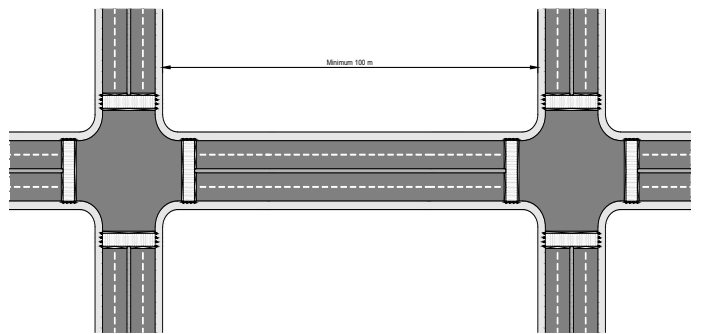


Figure 7\_22(c): Minimum Distance between two intersections

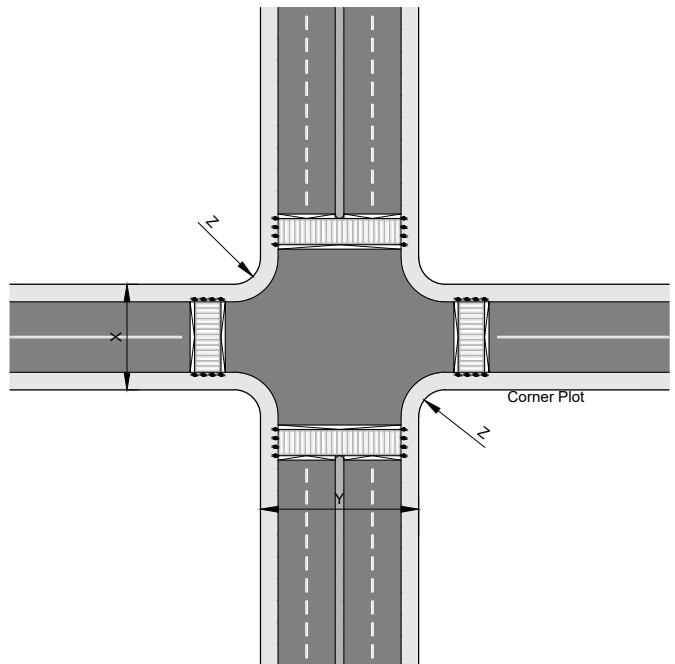


Figure 7\_22(d): Corner Plot Radius



## 7.7 Guidelines for Integrating Informal Activities and Settlements

### 7.7.1 Guidelines for integrating Informal activities

The authority should identify existing informal vendors in the LAP and should consider space allocation for them in the Proposed LAP if possible. Formalized vending spaces should be provided / allocated to vendors that are well designed along with the street sections and can be provided on rental basis. (Refer Figure 7\_23)

Informal activities are the activities such as vending or hawking that take place on temporary basis on a street or other area. Such Informal activities are often perceived as undesirable when they become unmanaged and begin to spill over pedestrian pathways and roads causing congestion, inconvenience and nuisance to other people. However, if they are managed and planned in an organized manner, they can provide significant benefit to the community, while they provide employment to the economically weaker section; they also provide convenient and affordable shopping and eating opportunities to the neighborhood and the city. Therefore, it is crucial to sensitively plan for the informal activities while preparing the LAP.

While preparing LAP, a survey of informal activities taking place in the area should be carried out and numbers of hawkers and the area should be noted. While preparing the LAP layout the informal activities, if considered desirable by the authority while preparing the LAP should incorporate in the following manner:

- Informal activities require easy pedestrian access and thrive if they are located along a street or along a thoroughfare. (Refer Figure 7\_24)
- Therefore, a clear space should be identified along ROW of a pedestrian priority street, located in an area with high pedestrian activity such as pedestrian streets connecting to public transport stations religious institutions or important destinations.
- In LAP layout such streets should be planned with sufficient ROW to accommodate vending activities with approximately 4 sq. m space for each vendor in such a way that they can directly face main pedestrian movement area of minimum 3 m width (in case of vending only one side) and minimum 6 m width should be provided for such pedestrian movement area (in case of vending on both sides).

Such informal activities may also be accommodated within a public plot with easy access from an important

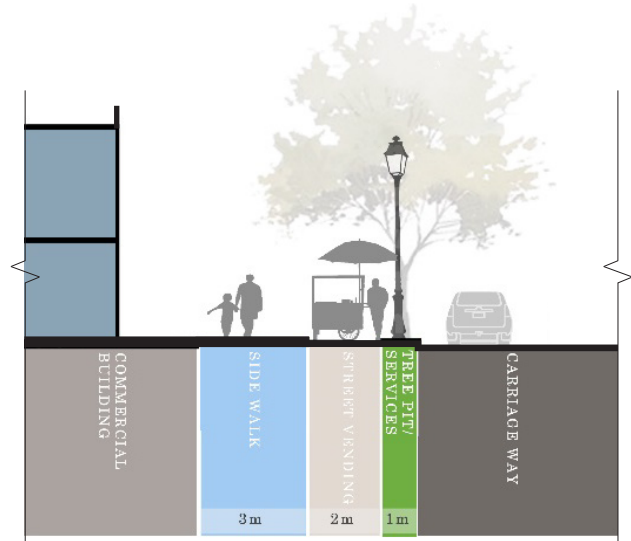


Figure 7\_23: Incorporating Informal vending in street design.



Figure 7\_24: Linear Informal vending zones along the street are a better option Example Market at Law garden, Ahmedabad.

Source: <https://images.livemint.com/r/LiveMint/Period1/2015/08/01/Photos/ahmedabad.jpg>



Figure 7\_25: Concentrated Informal vending on dedicated plots are generally not successful in the long-run.

street and with minimum two entry points of minimum 6 m clear width each. (Refer Figure 7\_25)

## 7.7.2 Guidelines for Integrating Informal Settlements

All Informal settlements within the LAP area should be listed by the ULBs. Based on a detailed classification of these Informal settlements by the ULBs, various strategies for their improvement should be adopted as per the relevant slum redevelopment and rehabilitation policies at the state level.

Generally the informal settlements that are on public lands owned by government entities may be easier to redevelop or rehabilitate compared to the informal settlements on private lands. A policy for slum redevelopment on private lands should also be framed to ensure a win-win situation for all stakeholders. Also, the policy should provide clear guidelines for ensuring basic health and light & ventilation for all units. Therefore while preparing the Local Area Plan and identifying expansion of public right of ways, identifying new streets or provision for new amenities such distinction of land ownership and land tenure should be considered.



Figure 7\_26: Area Based Development for redevelopment of Slums in Ahmadabad

## 7.8 Guidelines for Preparing Parking Management

On-street parking is a crucial element of urban streets. Convenient on-street parking on commercial streets help attract customers and boosts commercial viability of businesses. Similarly, on-street parking on residential streets allow convenient additional parking for residents.

Currently in Ahmedabad there exists two types of conditions related to on-street parking. One, where the streets do not have any system or provision for on-street Parking (refer figure 7\_27), and second, where a few streets have a well-designed on-street parking and pay-and-park system. (refer figure 7\_28)

However, this too is not functioning as expected as many customers try to evade parking fees by parking on vehicular ROW or on the adjacent residential streets. Such conditions can be avoided only if a comprehensive parking management plan is worked out and a parking zone system is implemented.

The adjacent plan identifies various Parking Zones across the TOZ corridor. (Refer Figure 7\_29) The parking zones are identified around major parking generators such as prime commercial streets, local business districts, transit station areas, informal market areas, and include streets of surrounding residential areas that are likely impacted by spill-over parking and related issues.

Within each parking zone the plan would identify two types of streets considering the type of street frontage and land uses (Refer Figure 7\_30):

- Commercial Streets with retail store fronts,
- Streets with residential frontage and uses.

The commercial streets identified on the parking zone map should be improved to implement a pay-and-park system that would allow customers to conveniently and safely park their vehicles and pay the required fees for parking. The parking fees may vary based on the demand depending on location of the zone and time etc. The residential streets identified on the parking zone map should

be improved to implement a Residential Parking, Permit system, where the residents living in the parking zone will be eligible to buy an annual parking permit, which will enable them to park on the residential streets of their zone. Only the vehicles displaying appropriate Parking Zone Permit will be allowed to park on the residential



Figure 7\_27: On Street Parking without system



Figure 7\_28: Paid Parking along major commercial street, Ahmedabad

streets of the zone.

Each zone should be managed by a parking management agency, appointed by the authority who will be allowed to take the parking fees, as well as will be responsible for keeping the streets free of any illegally parked vehicles, by means of charging fine or towing as necessary. The primary objective of Parking Management Plan is to develop and implement a self-sustaining mechanism:

- To organize on-street parking
- To enable enforcement
- To manage spill-over effect on adjacent streets
- To generate revenue to pay for the cost of implementing the system

In addition to identifying various parking zones, Parking Management Plan may also include guidelines and standards for parking spaces, signage, parking lanes etc. The above parking management system can be further modified or improved by the authority as required.

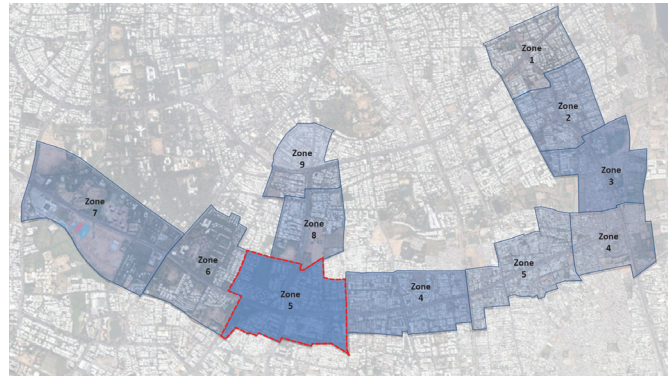


Figure 7\_29: Parking Management Zones- Key Plan  
Source: Draft TOZ-LAP Report, AUDA

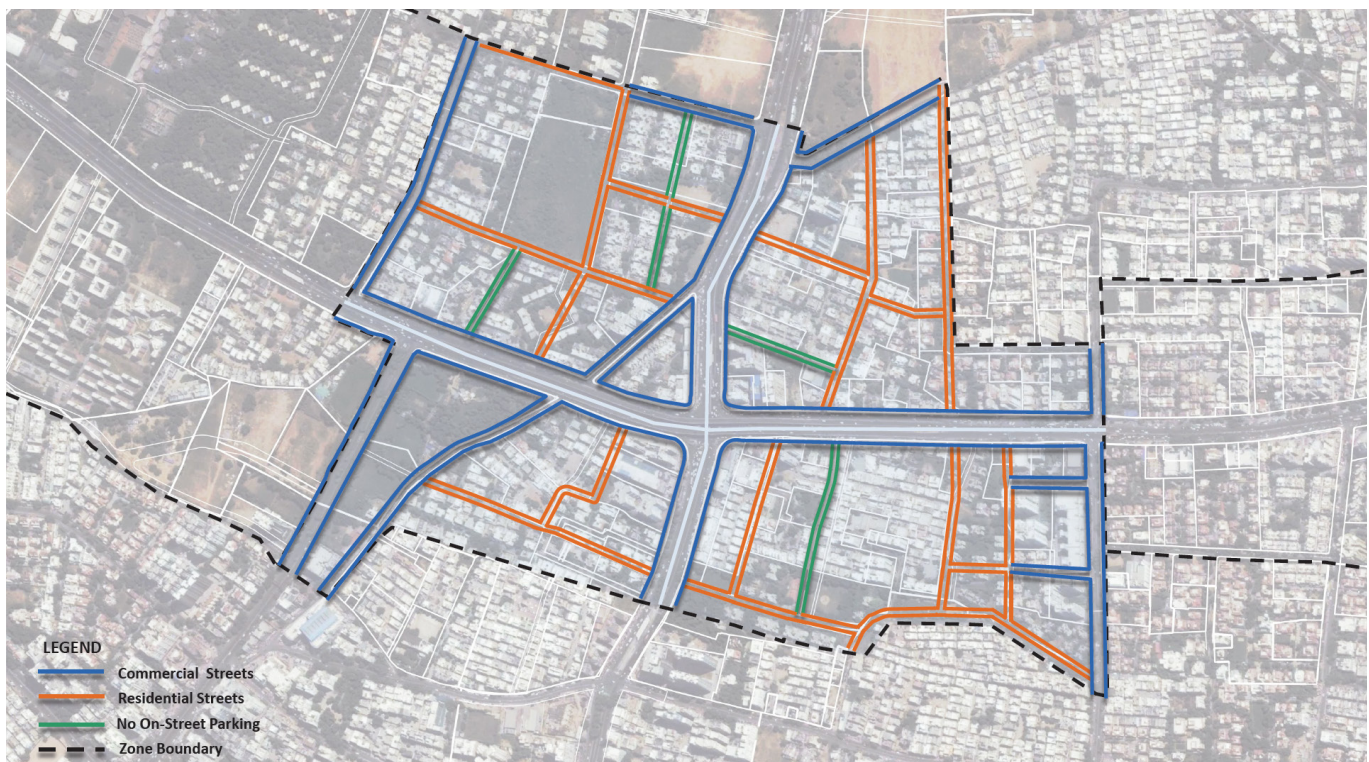


Figure 7\_30: Parking Management Zones 5- Strategy Map  
Source: Draft TOZ-LAP Report, AUDA

## 7.9 Guidelines for Providing Physical Infrastructure



Figure 7\_31: Provision of Underground Utilities based on the street type and context  
Source: Global Street Design Guide, NATCO

The authority should prepare the detailed project report for each LAP for existing and proposed infrastructure requirements considering full capacity FSI is consumed.

### Recommendations for Water Management System:

With increased withdrawal of ground water, aquifers are depleting. Hence it is important to plan for comprehensive water management system that reduces the consumption of fresh water through water conservation measures, rain water harvesting, greywater recycling, ground water recharge etc.

**Recommendations for water supply:** Location for water works and tube well considering the topography and source of water. The network should be planned considering the natural topography to utilize gravity based network for water distribution and minimize requirement for pumping.

**Recommendations for sewerage:** The sewage network should be planned considering overall topography. In areas without centralized STP, the LAP layout should incorporate plots for sewage treatment facilities. Such plots should be carefully located considering topography and development distance from drinking water source.

**Recommendations for storm water:** LAP layout should keep low lying flood prone areas open and develop them as water bodies, and retention ponds integrated within green and open spaces. (Refer Figure 7\_32) LAP layout should recognize and consider all nalas and seasonal drains and ensure their continuity by integrating in the layout such that they become part of the design public ROW or Public Open spaces; and not get paved over or built over with roads or buildings.

While preparing LAP layout all nalas should be kept open; culverts and/ or bridges at appropriate span must be planned. It should be incorporated in the layout as well as in the cost estimates. Also, wherever necessary the nalas should be planned to be channelized to prevent flooding and its cost should be incorporated in the overall LAP cost estimates.

The storm water drainage system should be laid out in such a way that it first leads to local water bodies to allow as much percolation in ground as possible. The water bodies should be interlinked so overflow of one water body can go to other water bodies and ultimately it can lead to the main river within the water shed. Also, percolation wells or percolation bores should be intermittently placed within the storm water system, after conducting soil percolation tests and ground water recharge rate tests at different potential location.

**Recommendations for Waste Water Management:** LAP layout should include integral infrastructure for waste water management and reuse.

**Recommendations for solid waste management:** LAP layout must consider and include locations for solid waste transfer stations. Lack of such planned approach result in solid waste transfer along major road ROW and result in unhygienic conditions and foul odors for all users of the roads and people living and working in close proximity. Instead proper land area for such transfer stations should be clearly identified in TP scheme layout and located at a place that can be easily accessible by the garbage trucks. (Refer Figure 7\_33 and 7\_34)

**Recommendations for electrical substations:** LAP layout should identify public purpose plots at appropriate locations for electrical substation and/ or electrical transformers.



Figure 7\_32: Networking storm water drains to rain water recharge wells in Vastrapur lake- a case of good practice  
source: Google Earth Satellite Image

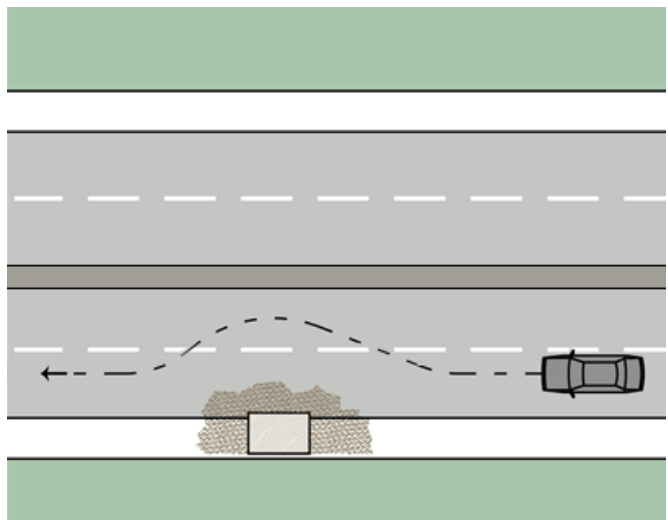


Figure 7\_33: Present condition- no dedicated space provided for waste collection at neighborhood level

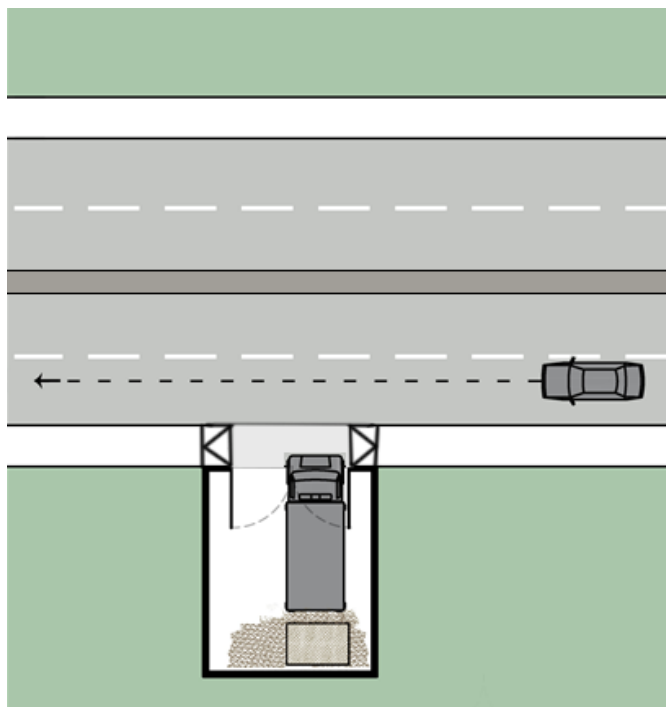


Figure 7\_34: Proposed dedicated waste collection area allocated at neighborhood level

## 7.10 Guidelines for Open Spaces, Network of Green Spaces and Waterbodies

With many recent examples of haphazard development resulting in flooding, ground water depletion, urban heat island effects etc., it is abundantly clear that any new development must be planned to retain and/or integrate sensitive natural features such as waterbodies, wetlands, bio-diversity areas, flood prone areas, forest areas etc., with the green and open space network planned as part of the LAP. This also requires assessment of natural slopes, watersheds and underground aquifers.

While preparation of LAP the authority should carry out the following:

**Maps and Analysis:** prepare detailed maps and analysis of the existing topography, slopes, natural drains and waterbodies including seasonal and perennial streams, nalas, ponds and lakes, existing forested areas, wetlands, natural habitats of sensitive flora and fauna, low lying flood prone areas etc.

**Retain and integrate lakes, water bodies:** The LAP layout should strategically locate gardens and green spaces to incorporate existing lakes and waterbodies as part of them. (Refer Figure 7\_35)

The LAP layout should clearly identify the land ownership of such waterbodies, and if they are not under government ownership, they should be brought under government ownership or public ROW through land reconstitution process.

**Integrate low lying areas, flood prone areas for ground water recharge:** The LAP layout must avoid development over low lying, flood prone areas and wetlands. Instead they should be retained and integrated as part parks or green and open space network. Such low lying, flood prone areas can be converted into retention ponds or detention areas to allow percolation and ground water recharge

**Ensure continuity of natural drains and streams:** Natural drains and nalas feed into lakes and rivers and help maintain the underground water table. Over past decades almost all such nalas and small waterbodies have been built over or paved over. This has resulted in flooding of such areas in monsoons, and depletion of aquifers due to lack of recharge. (Refer Figure 7\_36)



Figure 7\_35: Continuity of Natural drains and streams

source: mdpi journal Special Issue "Soil Ecosystem Services, Land Planning, Landscape Design and Management"



Figure 7\_36: Incorporating Sensitive Environment Features in LAP

source: mill river park and greenway, ground control

Therefore, while preparing LAP layout it is crucial to ensure continuity of such nalas by either (a) integrating them with street network, or (b) integrating them with open space network. In case of their integration with street network, the street ROW should be kept wide enough and the sections should be sensitively designed to allow sufficient level difference and a green buffer between the stream and the street ROW. Whereas, if the stream is bigger and requires wider buffer, it is better to integrate it within a ‘Greenway’ system with network of parks and open spaces, running through the LAP areas.



Figure 7\_37: Creating a network of open spaces (Green) and Natural (Blue) in the LAP

source: Bishan park, pintrest

**Wetlands and Bio-diversity areas:** Wetlands areas or areas that remain swampy grasslands during certain part of the year are important part of ecology. Wetlands not only act as buffers for storm water and help in flood control, but they also sustain many birds and animal species that feed on smaller animals, insects and vegetation living on such wetlands. (Refer Figure 7\_37) Therefore, a LAP layout should integrate such areas within the network of greenways, parks and open spaces.

**Gardens and Open Spaces:** Each LAP should include gardens and open spaces that serve at various scales, ranging from neighborhood level, to larger area level and city level. The scale of gardens and open spaces should vary based on the nature of development envisaged within the LAP. For example, a LAP with primarily residential neighbourhood should identify multiple, well dispersed smaller gardens. Whereas a LAP envisioned to become an urban centre for the surrounding suburbs should be planned to include a city level park or open spaces that may become a focal point for the development. (Refer

Figure 7\_38)



Figure 7\_38: Different Scales of Open Spaces, Gardens and Parks.



## 7.11 Guidelines for Locating Social Amenities

Provision for adequate, well located social amenities is very important to increase resilience of the community and to deal with emergency situations. The recent and the past experiences have shown that places like health care centers, community halls, schools, religious institutions, neighborhood centers, etc; have not only provided refuge during floods, cyclones, earthquakes, and other natural and man-made disasters due to climate change etc, but they have also been useful as multipurpose facilities that have been converted into health care centers, vaccination centers and hospitals in pandemic situations.

Provision of social amenities such as primary health care centers, educational amenities, police stations, fire station, community centers, recreational areas, etc. is essential while planning a LAP. An assessment of the above listed amenities within the larger context should be carried out and need for additional amenities within the LAP area should be assessed after coordinating with the relevant departments and agencies.

Subsequently, plots for multipurpose social amenities should be located using the following considerations:

- Plots for Fire Station and related services should be located along arterial streets with wider ROW, preferably 24 m or bigger, in order to allow easy access and movement of fire and emergency vehicles. *(Refer Figure 7\_39, 7\_40, 7\_41)*
- Plots for schools should not be directly opening up on high traffic streets or arterials. Instead they should be located on 18 or 24 m wide streets which are then connected with bigger arterials. Also, such plots for schools should not be located on small 12 m or 9 m ROW as they generate significant traffic and parking demand during opening and closing hours. *(Refer Figure 7\_42, 7\_43, 7\_44)*
- Plots for neighborhood center and health care center and other such public amenities are best provided along major streets connecting residential areas to allow the residents an ease of access. Access to parking for such amenities should not be located on narrow neighborhood street as they create congestion and nuisance for the residents.

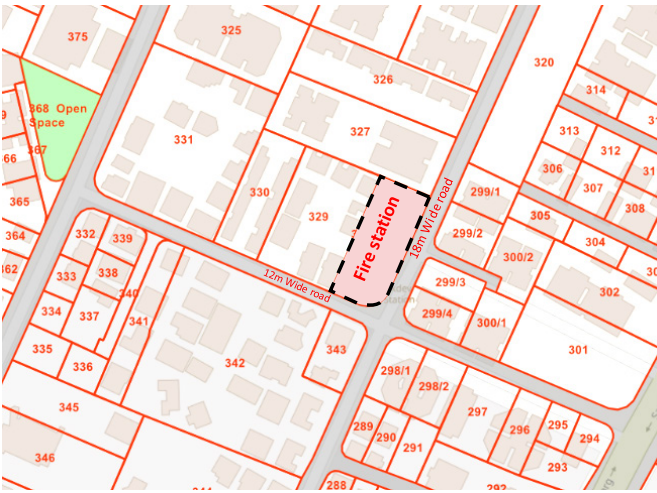


Figure 7\_39: Locating Fire Station on narrow road should be avoided.

source : TPVD

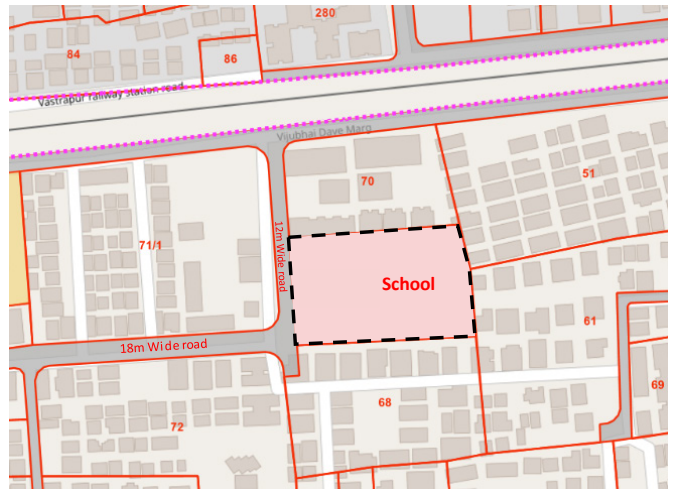


Figure 7\_42: School on 12 m road causes traffic congestion during opening and closing hours.

source : TPVD



Figure 7\_40: Fire station situated on 120 feet road

source : TPVD

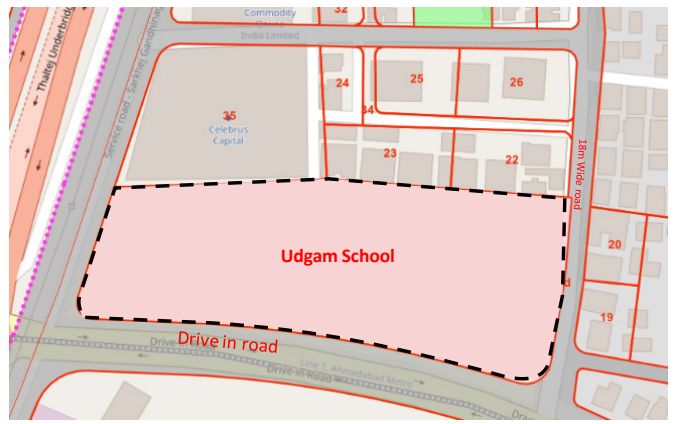


Figure 7\_43 School situated on well connected major road

source : TPVD



Figure 7\_41: Fire station access through a major street



Figure 7\_44: On ground scenario of a School situated on well connected major road

# 08.

---

## Regulations and Guidelines for LAP

- 8.1 Regulations
- 8.2 Components of Form Based Regulations
- 8.3 Guidelines for development of streets and Public Areas

### **Highlights**

- *The conventional rule-based approach to regulations results in a complex system set of rules which are difficult to interpret costly to administer and impractical to enforce. This chapter provides a powerful alternative to conventional rule based and use based zoning and regulations through Form Based Regulations.*
- *Form Based Regulations focus on improving urban form and physical environment of our cities. They regulate building form to achieve the desired character of urban environment envisaged for the street, district, zone or precinct.*
- *Apart from Form-Based Regulations, this chapter also provides guidance for development of streets and public areas.*

## 8.1 Regulations

### 8.1.1 Background

The built form and character of our cities and urban areas today is a direct result of the development regulations they have to follow. Currently our regulations are use-based and rule-based approach, which was originally developed in early 1900s as a response to the chaotic urbanization and overcrowding due to industrialization.

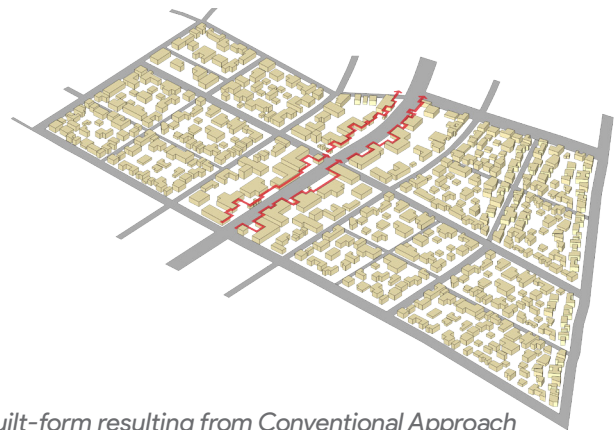
These use-based and rule-based regulations define permitted land uses, FSI, densities, heights, margins, parking etc. based on certain rules. This rule-based approach results in incongruent margins and street fronts, unpredictable spikes in built-form and floor space, inefficient use of precious urban land and chaotic urban character. The conventional rule-based approach also results in a complex system of regulations which are difficult to interpret, costly to administer and impractical to enforce.

Form Based Regulations (FBR) are land development regulation that fosters predictable built results and a high quality urban environment by regulating physical form (rather than regulating uses). The form-based regulation is not a mere guideline, but a legal document adopted by a development authority or urban local body of a city or a town. Form-based regulation offers a powerful alternative to conventional rule based and use based zoning and regulations.

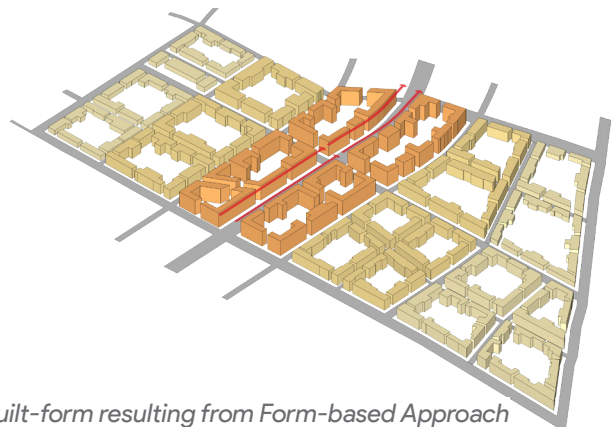
### 8.1.2 Conventional Approach vs Form Based Approach

Form Based Approach to regulations is different from conventional rule-based approach. The emphasis is on form, and not use. Unlike conventional regulations, Form Based Regulations focus on improving urban form and physical environment of our cities. (Refer Figure 8\_1) They regulate building form to achieve the desired character of urban environment envisaged for the street, district, zone or precinct.

Due to their emphasis on design, form-based codes usually provide greater predictability about the visual aspects of development, including how well it fits in with the existing context of the community. They offer a community the means to create the physical development it wants and developers a clearer understanding of what the community seeks



*Built-form resulting from Conventional Approach*



*Built-form resulting from Form-based Approach*

Figure 8\_1: Envisioning Built form for LAP

## 8.2 Components of Form Based Regulations

Form based regulations could be one of the important tools to achieve the desired urban environment. Hence, their preparation requires a very different approach of planning and zoning.

Usually the first step towards developing form-based regulations is to identify the desired characters of the areas under focus and identify zones based on these desired characters. This will be followed by identifying regulations and guidelines for the form-based zones.

Below are the main components of form-based regulations that would follow the vision and proposals identified in the master plan, development plan or local area plan.

Components of Form Based Regulations:

- Form Based Zoning Plan (Map)
- Form Based Regulations (regulating development on individual plots)

### 8.2.1 Form Based Zoning Plan (Map)

It designates locations where different building form/ open space standards apply, based on clear community intentions of the area's physical character. (Refer Figure 8\_2)

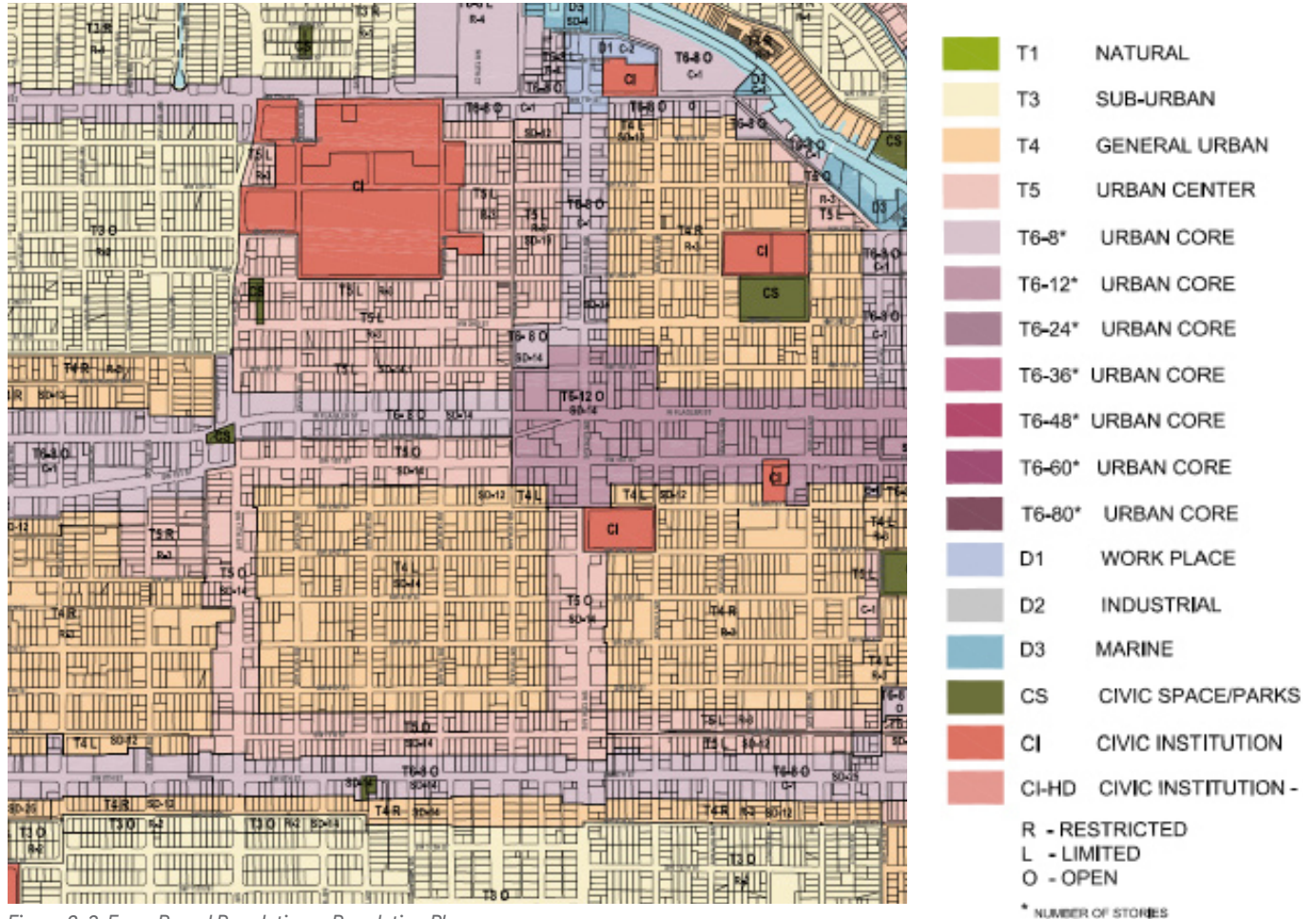


Figure 8\_2: Form Based Regulations- Regulating Plan

Source: FBCI

## 8.2.2 Form Based Regulations

Form Based Regulations are different from conventional rule-based regulations. Unlike conventional regulations which regulate use of land, the Form Based Regulations focus on improving urban form and physical environment.

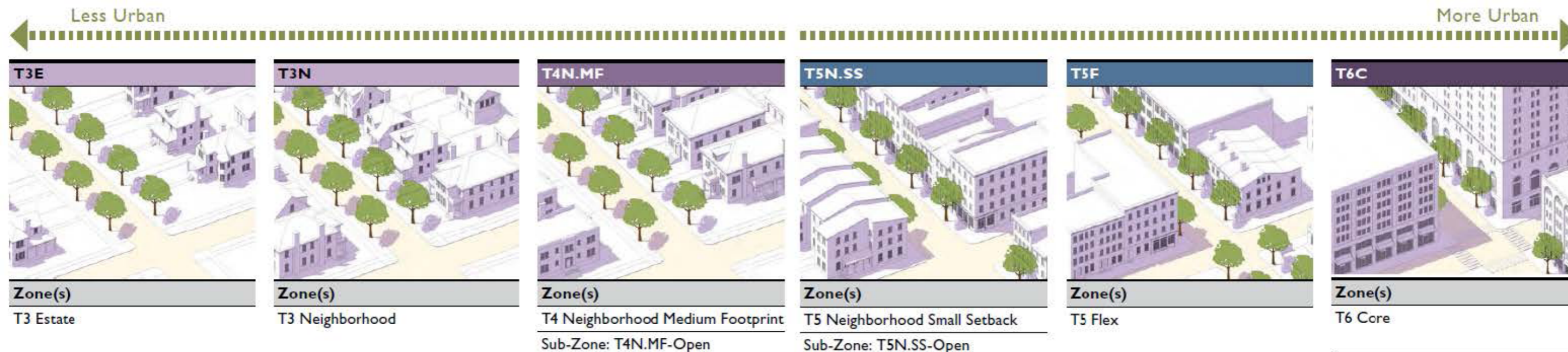
*(Refer Figure 8\_3)*

## 8.2.3 Types of regulations

Typically, development control regulations are made up of three types of regulations - Planning Regulations, Procedure Regulations and Performance Regulations. Planning Regulations provide regulations related to form of buildings, setback, height, permissible uses etc. Performance Regulations prescribe minimum standards of design and construction to ensure public health and safety. Procedure Regulations identify the procedure for securing various development and building permissions.

In order to be successfully implemented the LAP, Regulation need to carefully improvise and include all three types of regulations.

- **Planning Regulations:** Formulation of regulations must begin with identifying Planning Regulations which regulate built form and urban environment by regulating features such as setbacks, height, volume, façade, arcades, parking etc.
- **Procedure Regulations:** Beyond identifying Planning Regulations, it should also improve and simplify Procedure Regulations. It should identify simple, easy-to-administer procedures, which reduce subjectivity and ambiguities in approval procedures and minimize complexities to expedite development.
- **Performance Regulations:** Regulations also require to carefully improvise on building performance regulations as high standards impose huge costs on development diminishing the affordability. Therefore, set of graded building performance regulations should be developed, which would carefully calibrate the standards to allow inclusive and affordable housing along with high-standard high-cost developments.

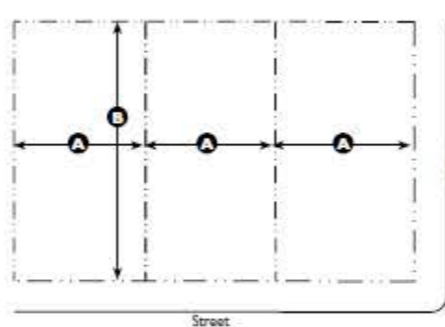


**T6 Core (T6C)**

1703-2.120 T6 Core (T6C)



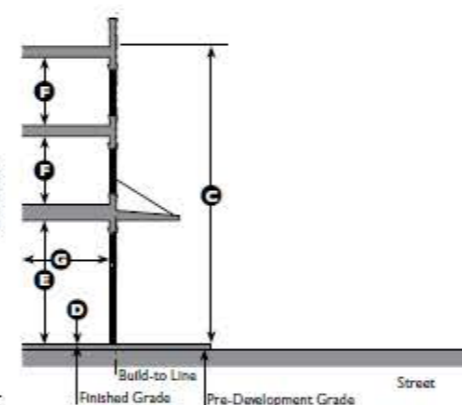
<b>A. Intent</b>		<b>B. Sub-Zone(s)</b>	
To reinforce and enhance the downtown city core and to enable it to evolve into a complete neighborhood that provides local and regional service, retail, entertainment, civic, and public uses, as well as a variety of urban housing choices. This zone can also be used around transit nodes. The following are generally appropriate form elements in this zone:		T6C-Open Zone (T6C-O) The open sub-zone provides the same building form but allows for a more diverse mix of uses.	
Attached	Medium-to-Large Footprint	<i>General note: The drawing above is intended to provide a brief overview of this transect zone and is illustrative only.</i>	
Simple Wall Plane along Street	Building at ROW		
No Side Setbacks	4 Stories or More		
Diverse Mix of Frontages	Primarily Shopfronts		



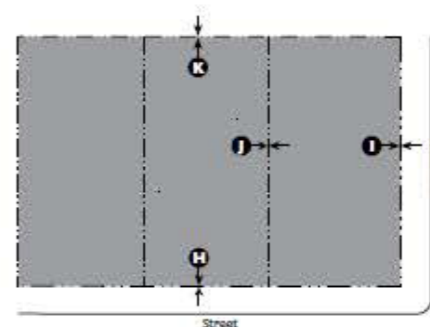
**Key**  
--- ROW / Lot Line

C. Allowed Building Types			
Building Type	Lot		Standards
	Width A	Depth C	
Main Street	25' min.;	100' min.	1703-3.140
Mixed-Use	150' max.		
Mid-Rise	50' min.;	100' min.	1703-3.160,
	250' max.		1703-3.180
High-Rise	100' min.;	100' min.	1703-3.170,
	300' max.		1703-3.180

D. Building Form	
Height (See Section 1703-5.60)	
Main Building	4 stories min. <b>C</b>
Accessory Structure(s)	1 story max.
Ground Floor Finish Level above Street Centerline	6" max. <b>D</b>
Ground Floor Ceiling	<b>E</b>
Service or Retail	14' min.
Upper Floor(s) Ceiling	9' min. <b>F</b>
Ground floor lobbies and common areas in multi-unit buildings may have a 0" to 6" ground floor finish level.	
Within 20' of the rear lot line, buildings may not be more than a half-story taller than the allowed height of adjacent buildings.	



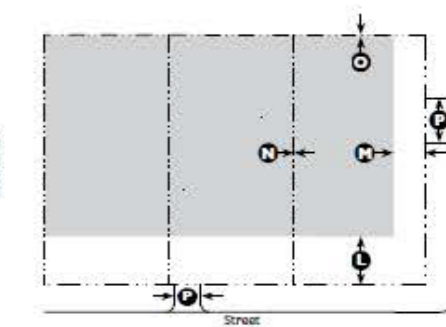
D. Building Form (continued)	
Footprint	
Per Section 1703-3 (Specific to Building Types)	
Depth, Ground-Floor Space	50' min. <b>C</b>
Accessory Structure(s)	
Width	24' max.
Depth	32' max.
Miscellaneous	
Distance Between Entries, to	
Ground Floor (Uses)	50' max.
Loading docks, overhead doors, and other service entries shall be screened and not be located on primary street facades.	
All mechanical equipment and utilities must be screened from view from the street.	



**Key**  
--- ROW / Lot Line  
--- Building Setback Line

E. Building Placement	
Build-to Line (Distance from ROW / Lot Line)	
Front	0' <b>H</b>
Side Street	0' <b>I</b>
BTL Defined by a Building	
Front	100%
Side Street	80% min.
Setback <sup>1</sup> (Distance from RCW / Lot Line) <sup>2</sup>	
Side	0' max. <b>I</b>
Rear	0' min. <b>H</b>
Miscellaneous	

<sup>1</sup> Where existing adjacent buildings are in front of the regulated minimum front setback, the building may be set to align with the front building facade of the most immediately adjacent property.  
<sup>2</sup> Where the lot line extends to the centerline of the street, the setback is measured from the closest edge of the curb, or presumable curb except where a public sidewalk exists, then the setback is measured from the closest edge of the public sidewalk.



**Key**  
--- ROW / Lot Line  
--- Parking Setback Line

F. Parking	
Required Spaces	
Residential Uses	No min.
Service, Retail, Recreation, Education, Public Assembly Uses	No min.; 4 per 1000 sf max.
Required parking may be reduced as set forth in Subsection 1703-5.50 (Parking).	
For uses not listed above, see Table 1703-5.50.A (Parking Spaces Required).	
Location (Distance from ROW / Lot Line) <sup>1</sup>	
Front Setback	
Ground Floor	50' min.
Upper Floors	30' min.
Side Street Setback	
Ground Floor	30' min.
Upper Floors	0' min.
Side Setback	0' min. <b>N</b>
Rear Setback	0' min. <b>O</b>
Miscellaneous	
Curb Cut or Parking Driveway Width <b>P</b>	
≤ 40 spaces	14' max.
> 40 spaces	18' max.

All parking structures must be screened from the front street by habitable space at least 15' deep from street. Driveways may be shared between adjacent parcels.  
<sup>1</sup> Where the lot line extends to the centerline of the street, the setback is measured from the closest edge of the curb, or presumable curb except where a public sidewalk exists, then the setback is measured from the closest edge of the public sidewalk.

Figure 8\_3: Example of Form Based Regulations  
Source: Miami Form-based Codes

*Page Intentionally Left Blank*



---

### **8.3 Guidelines for development of streets and public areas**

Improving elements in public realm is as crucial as regulating the built form in private realm. Typically, this is the responsibility of municipalities and urban local bodies. The Form Based Guidelines for streets and public areas will classify streets in various categories based on their character (and not only function or ROW width) and provide design specifications for the elements such as streetscape, sidewalks, travel lanes, on-street parking, street furniture, landscaping etc.

*Page Intentionally Left Blank*

# 09.

---

## Compensation, Contribution, Cost and Revenue for Implementation of LAP

- 9.1 Land Contribution and FSI Compensation
- 9.2 Cost of Preparation and Implementation of LAP Works
- 9.3 Revenue Generation & Finance

### **Highlights**

- o *The implementation of LAP relies on incentivizing stakeholders by giving compensations in the form of FSI and TDR for the land contributed towards Public Domain. This chapter provides detailed guidelines for providing such compensation to the stakeholders under various scenarios.*
- o *This chapter also provides guidance for estimating cost of preparation and implementation of LAP works and provides guidelines for revenue estimation and cash flow management strategies.*

Local Area Plan should have records of inflow and outflow of funds and systematic overall financial strategy. The following section discusses the principles for cost estimations and provide guidelines for revenue estimation and cash flow management strategies.

## 9.1 Land Contribution and FSI Compensation

After the incentives for the redevelopment are given, different plots will have different conditions for redevelopment based on the plot size, available FSI and applicable regulations. For example; a small plot where significant land contribution is required may become difficult to redevelop after the land contribution. In such cases, FSI compensation may be given in form of TDR. Below are various scenarios, that may arise while implementing the LAP:

### Scenario 1: Plot remains developable after land contribution

After the Land Contribution for public domain, If the additional floor space can be consumed on the remaining plot, that plot should develop as per the prescribed regulations of the respective LAP. (Refer Fig. 9\_1)

OR

The plot owner can avail the TDR for the additional FSI (inclusive the TDR of the Land contributed in public domain). In such case, the respective authority should issue the TDR Certificate to the plot owner. Availed TDR can be utilized in the prescribed TDR receiving zones, as per the regulations of LAP. (Refer Fig. 9\_2)

### Scenario 2: Plot becomes undevelopable after land contribution

**2A: If the plot is amalgamated with the neighboring plot making the resultant plot developable:** After the Land Contribution for public domain, If the plot owner choose to amalgamate the remaining plot with the adjoining plot (following the prescribed regulations for the amalgamation of plots in particular LAP), authority should compensate in form of TDR for the deducted/contributed area in public domain. (Refer Fig. 9\_3)

**2B: if the plot is not amalgamated with the neighboring plot and the authority requires the plot for development of LAP:** If the plot owner is not willing to amalgamate, authority should compensate the TDR of the full plot area (inclusive the TDR of the Land contributed in public domain) and should acquire the plot which should vest with the implementing local authority and that plot should be put to use for the public purpose or for sale by the authority. (Refer Fig. 9\_4)

#### Scenario 1A:

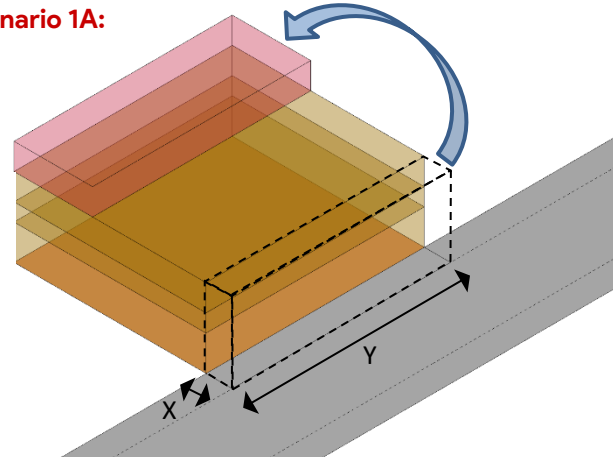


Figure 9\_1: Additional Floor space can be consumed on the same plot

#### Scenario 1B:

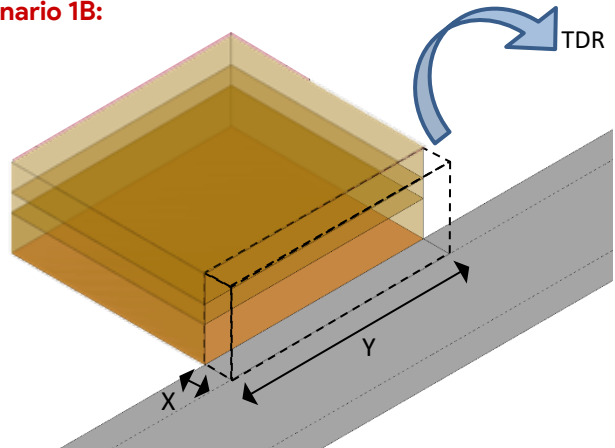


Figure 9\_2: Additional Floor space can be availed as TDR

#### Scenario 2A:

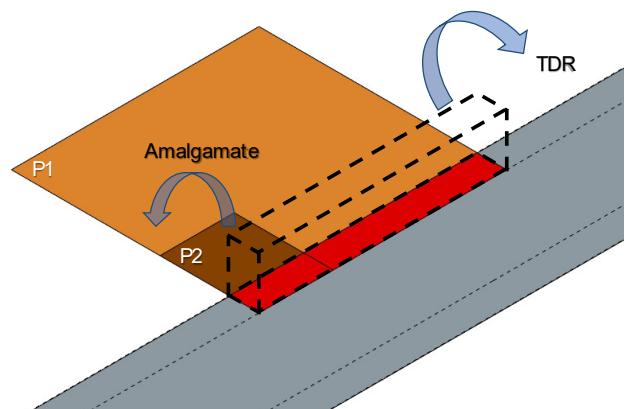


Figure 9\_3: After Amalgamation with neighbouring plot, Additional Floor space can be availed as TDR

#### Scenario 2B:

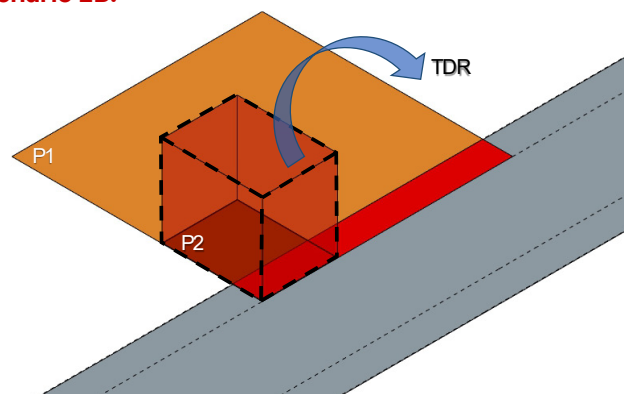


Figure 9\_4: TDR of full plot area

Source: CUPP, CRDF

If a plot is not redeveloped within 3 years of LAP implementation and if the authority deems it required for implementation of road network, or amenities identified in the LAP, then the authority may acquire such plot after paying compensation as per the prevailing Act.

**In any case, if necessary, the Authority can acquire any plot by paying compensation as per the prevailing statutory provisions (e.g. Jantri Rate)**

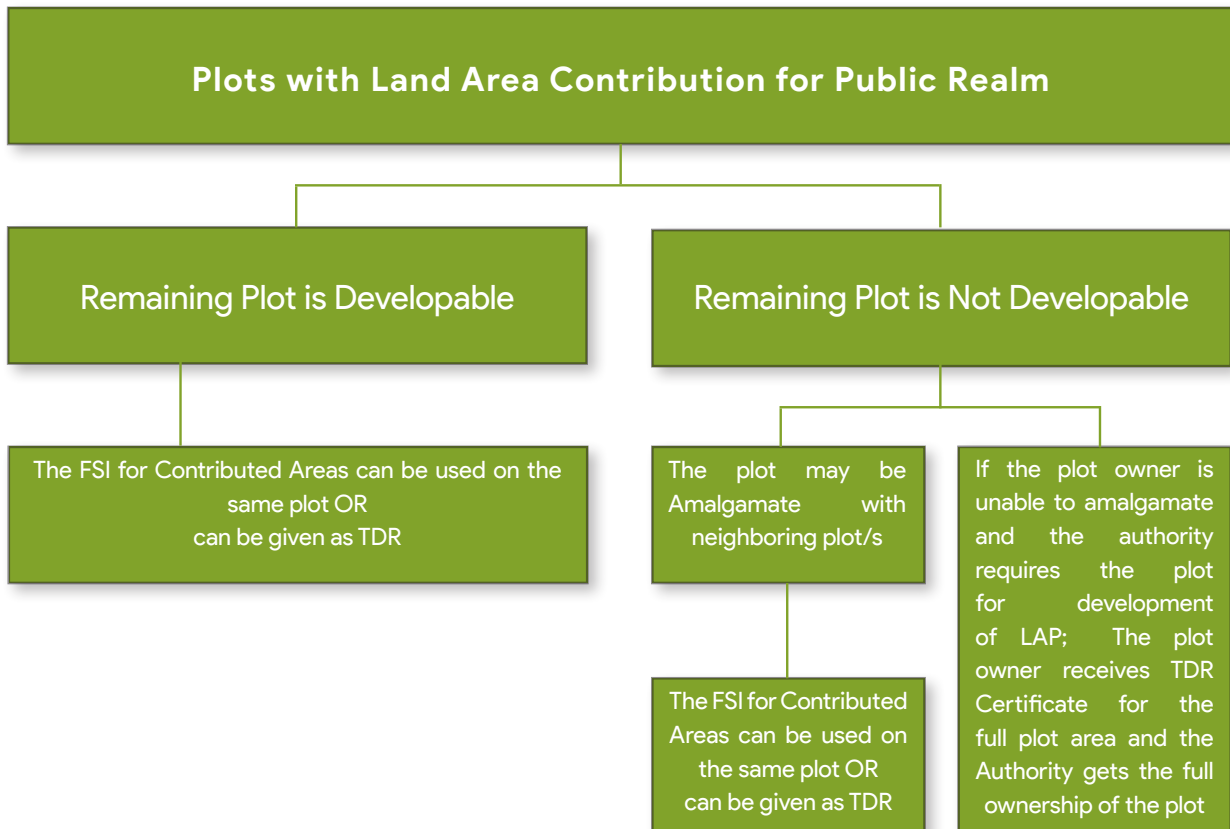


Figure 9\_5: Conditions of Compensations for the persons affected by the LAP

## 9.2 Cost of Preparation & Implementation of LAP Works

The cost estimation for a particular LAP should be prepared and finalized during preparation of Draft LAP Stage under provision of sections 76A(3)(e) and (f) of the Act. (Refer Table 9\_1) This includes all sums to be spent by the authority in making and execution of LAP, all sums payable as compensation for land reserved or designated for public purpose, all amounts to be paid to the plot owners as per owners contribution form, all legal expenses and expenses for preparation of LAP.

### 9.2.1 Cost of Infrastructure Works for LAP

Cost of works is a critical part of the Cost of LAP. The cost of works should be worked out following the provisions of sections 76A(3)(a), (b), (c) of the Act [Refer Table 9\_2 for Abstract Sheet for cost of works]. This should include the following:

Table 9\_1: Sample OWNER'S CONTRIBUTION FORM to calculate the compensation to the plot owners.

OWNER'S CONTRIBUTION FORM									
LAP Site: Existing Situation Information									
Sr. NO	Owner's Name as per record	TPS NO.	TP NAME	FP No. or Survey No. \ Existing Plots no for other than Gujarat	Building Use	Plot Area as per records (in sqmt)	Existing Permissible FSI (Total FSI)	Existing Built up area (in sqmt)	Existing Permissible Built up area
						A	B	C	D = A *B
1	XXX	3	Ellis Bridge	201	Residential	625	2.7	1687.5	2193.75
2	YYY	3	Ellis Bridge	202	Residential	225	2.7	607.5	789.75
3	ZZZ	3	Ellis Bridge	203	Commercial	1000	2.7	2700	3510

OWNER'S CONTRIBUTION FORM (Continue)									
Calculations for contributions									
Total Land area contribution in public domain (area to be deducted) (in sqmt)	NEW Permissible FSI as per LAP	New Developable Built-up Area developable on Net remaining FP AREA (in sqmt)	Built Up AREA permissible on the contributed land in public domain that can be utilised on remaining plot or avail as TDR	Builtup area permissible to be utilised on the remaining plot or to be given as TDR	prevailing jantri rate (in INR/sqmt)	BASE FSI/ FSI CONSUMED	Chargeable FSI/ REMAINING (PURCHASABLE) PREMIUM FSI	Builtup area for chargeable FSI	Amount Payable towards chargeable FSI
E	F	G = (A*F)	H=(E*F)	I	J	K	L	M	N
0	4	2500	0	0	5000	1.8	2.2	1375	27,50,000
50	4	900	200	200	5000	1.8	2.2	495	9,90,000
100	4	4000	400	400	5000	1.8	2.2	2200	44,00,000

- Cost of development of infrastructure like such as roads and bridges including all elements above and below ground such as pavements, street lights, street furniture, landscaping, signage etc.
- Cost of provision of infrastructure networks such as water, sewage, storm water, gas, electrical and telecom services, and construction of utility ducts for carrying such services.
- Structures for management of solid waste.
- Development of green open spaces, plazas etc.
- Development, conservation and/or protection of lakes, nalas and other such natural water bodies, and construction of culverts and small bridges over nalas and water streams.

The cost of works shall be calculated based on the appropriate Schedule of Rates (SOR) and/or the prevalent market value of the materials and services as decided by the authority.

The cost estimations for the above mentioned elements should be calculated and noted in Form M [Refer Table 9\_3 for calculation table for Cost Estimation Form].

Experience has shown that a major part of the cost of preparation and implementation of the LAP can be recovered from the revenue generation and value capture mechanism as highlighted in chapter 9.3.

Table 9\_2: Abstract Sheet for Cost of Works

Abstract Sheet for Cost of Works		
Expenses under Section 76A( 3) (a), (b),(c)		
Sr. No	Name of Work	Amount (INR)
01	Construction/ Resurfacing/ Expansion of existing roads and new proposed roads (as per the LAP proposal)	
02	Providing electricity, street light and underground infrastructure	
03	Providing and laying of appropriate size gutter line including treatment plant, gray water recycling system, storm water disposal, rainwater harvesting and ground water recharge Structures.	
04	Development of green and open spaces and water bodies, conservation of natural drains, wetlands and environmentally sensitive areas by building structures for retaining water, culverts and other civil and landscape works. etc	
05	Providing and laying of appropriate size water pipeline including tube well, sump well, pump room with pump in connection to adjoining schemes etc. complete	
		Total (A)
		GRAND TOTAL (Round off) (A)

Table 9\_3: Cost Estimation Form and its components

Cost Estimation Form		
Cost of preparation of LAP		
Sr. No	Name of Work	Amount (INR)
01	Cost of Infrastructure Development Works	
02	Preparation of Base Map	
03	Preparation of Existing Situation Survey and Thematic Maps Preparation (as applicable)	
04	Publication of LAP under the Act	
05	Conducting Owner's meeting and stakeholder's consultations	
06	Compensation to Land Owners as per prevailing act (if any)	
07		
		Total (A)
		GRAND TOTAL (Round off)(B)

## 9.2.2 Cost of Preparation of LAP

The cost estimation for the surveys, field study and data collection process for a particular LAP should be prepared and finalized during preparation of Draft LAP Stage. This includes all the expenses of conducting Total Station Surveys/ Drone Survey and Physical Verification surveys on site to collect various site data and preparing maps and reports of existing condition of site.

## 9.3 Revenue Generation & Finance

### 9.3.1 Revenue generation and value capture

The concept of Local Area Plan is based on incentivized redevelopment whereby creating additional value for the property owners and subsequently capturing a part of this increase through tools such as chargeable FSI, development fees, property charges, TDRs etc to partially or fully recover the cost of infrastructure and other improvements.

For this purpose, the authority should identify various sources of revenue through value capture for implementation of LAP. Such sources may include the following:

- **Chargeable FSI:** To incentivize development and/or redevelopment within the LAP area, additional chargeable FSI should be applicable, which can be charged at a certain percentages of the jantri rates. For e.g. the chargeable FSI could be charged at 20%, 30%, 40% etc. of the jantri rate.
- **TDR on public plots:** The authority can generate TDR equivalent to the Development Rights applicable on all public plots within the LAP such as parks, gardens etc. Revenue can be generated by ale of the TDR generated from such public plots.
- **Development/ re-development fees:** All development and redevelopment projects within the LAP area will be subjected to the standard development charges paid to the appropriate authority which can accounted towards the revenue generated from the LAP.
- **Property Taxes:** Additional revenue could be generated from collection of increased property taxes as a result of both increase in number of floor spaces as well as increased value of properties within the LAP.
- **Parking Fees:** The revenue collected from various sources of organized parking on-street parking and surface parking and multi-level parking on a dedicated public plot.





*Page Intentionally Left Blank*

## Stage Publication and Sanction of LAP

# 3

## 10.

### Publication, Modification and Submission of Draft LAP

- 10.1 Meetings of Persons affected by LAP & Receiving Suggestions and Objections
- 10.2 Considering Objections and Suggestions and Improving the LAP
- 10.3 Publishing of LAP in the Official Gazette and Inviting Objections & Suggestions
- 10.4 Considering Objections & Suggestions, Modifications and Submitting the LAP to State Government
- 10.5 Sanctioning of LAP

#### Highlights

- o Consultation with land owners and beneficiaries is an integral stage of LAP Preparation. This section provides guidance for carrying out “Meeting of Persons affected by LAP”.
- o This chapter also provides detailed guidance for Receiving suggestions and objections, carrying out required modifications and submission of the Draft LAP to the state Government.
- o After receiving the Draft LAP from the authority, the Government is required to review and sanction the LAP if satisfactory. At this stage it is recommended that the State Government appoints an Expert Review Committee (ERC), who can review the Draft LAP and make recommendations if necessary before the government sanctions it.

## 10.1 Meeting of Persons affected by LAP & Receiving Suggestions and Objections

[ Refer Section 76A 4(a) of the GTPUD Act 1976 ]

After preparing the Draft LAP including preparation of all Maps, Detailed Drawings, Regulations, and calculating all cost of works, Land contributions and compensations in Form-M and Form L, the authority should for the purpose of making the LAP "call a meeting and/or meetings of the persons affected by the LAP" under section 76-A 4(a). (Refer Figure 10\_1) The Authority should invite all such affected individuals whose addresses are known by sending individual notices. The Authority should also publish public notices at relevant places and in the one or more local Gujarati Newspapers circulating within the and around the Area delineated for preparation of LAP.

Such meeting and/or meetings could be undertaken in different ways and through various mediums including conducting group presentation, workshops, one on one interactions with affected stakeholders etc. The Authority should prepare and structure the events for such meeting and/or meetings with the aim to optimize stakeholder participation. This may be done to understand stakeholder's inhibitions, receive their valuable suggestions, note all objections and clarify all doubts. The Authority may decide to consult and take help of local Non-Government Organizations, Not-for profit organizations, community based organizations and professionals specializing in conducting workshops and communication material for such public interactions.

During and after such meeting and /or meetings, the Authority should note down all suggestions, objections and queries raised by the stakeholders in prescribed formats.

## 10.2 Considering Objections and Suggestions and Improving the LAP

[ Refer Section 76A 4(b) of the GTPUD Act 1976 ]

After conducting the "meeting and/or meetings of persons affected by LAP" and making a note of all suggestions, objections and queries [as explained in 10.1] the Authority should consider all objections and suggestions and modify the Draft LAP as deemed fit under section 76-A 4(b).



Figure 10\_1: Meeting of Persons Affected By LAP  
Source: AUDA

### 10.3 Publishing of LAP in the Official Gazette and Inviting Objections and Suggestions

The modified LAP should be published in the 'Official Gazette' and at the designated office of the Authority. The published plan should be kept open for inspection by the persons affected by the LAP and for receiving objections and suggestions (if any) from all such stakeholders within a period of 30 days from the publication of such modified Draft LAP in the Official Gazette as prescribed under section 76-A 4(b).

During the course of such period as prescribed in section 76-A4(b) where the Draft LAP is kept open for inspection by the persons affected by the LAP, the Authority should note down all suggestions, objections and queries raised by the stakeholders in prescribed formats.

### 10.4 Considering Objections and Suggestions, Modifications and Submitting the LAP to State Government

*[ Refer Section 76A ( 5) of the GTPUD Act 1976 ]*

The Authority should review and consider all objections and suggestions received from the 'persons affected by the LAP' under section 76-A 4(b) and provide their conclusions with respect to the way in which such objections and suggestions will be incorporated or not incorporated in the Draft LAP as prescribed under section 76-A 5 in the prescribed format.

The Authority should make all such modifications in the Draft LAP as deemed fit and thereafter submit the Draft LAP to the State Government for their Sanction. The Authority under section 76-A 5 should submit the following to the state government:

- The Draft LAP (including all Maps, Detailed Drawings, Regulations, M and L Forms and the LAP Report).
- Such prescribed format with all objections and suggestions received under section 76-A 4(b) and the conclusion and detailed manner in which the Authority has considered or not considered such Objections and Suggestions in the Draft LAP Submitted to the State Govt.

## 10.5 Sanctioning of LAP

[ Refer Section 76A ( 6) of the GTPUD Act 1976 ]

The State government may appoint an Expert Review Committee (ERC) to review and if required, recommend changes to be incorporated within the Draft LAP.

If required, the Authority shall consider the changes recommended by ERC and may revise the LAP as appropriate. The authority, if deemed required may notify the persons affected by such changes through individual notices and should provide a period of 30 days to all the stakeholders who may be directly or indirectly affected by such changes upon to provide objections and suggestions.

The Authority should make a note of all objections and suggestions received along with the conclusion and detailed manner in which the Authority has considered or not considered such Objections and Suggestions in the Draft LAP and resubmit the same to the state govt. for their sanction.

On receipt of the Draft LAP under section 76-A 5, the state government may sanction the LAP with or without any such conditions that it may deem fit as prescribed under section 76-A 6(a).

The state Government upon sanctioning the LAP under section 76-A 6(a), should by Notification state the place where the Sanctioned LAP should be kept open for inspection by the public as prescribed under section 76-A 7(a).

# 11.

## Recommended Improvements in Institutional Framework, Roles and Responsibilities

- 11.1 Appointment of Cadre Post of DILR for Updating Land Records for Base Map
- 11.2 Appointment of Advisors during Preparation of Draft LAP
- 11.3 Appointment of Expert Review Committee (ERC)
- 11.4 Appointment of Local Area Planning Coordinator (LAP Coordinator)

### Highlights

- o This chapter provides following key recommendations for improvements in institutional frameworks and identifies the roles and responsibilities:
  - Recommendation for Creation of the post of DILR in the UD & UHD with all the powers & required staff as that of the settlement commissioner, and appointment of Inspector of Land Records at Urban Development Authority and regional offices of TPVD under ACTP.
  - Recommendations for appointment of Advisors by the Authority to provide advisory guidance during preparation of Draft LAP
  - Recommendations for appointment of Expert Review Committee (ERC) to review the submitted Draft and LAP and provide recommendations to the government.
  - Recommendations to appoint an LAP coordinator within the Authority.

This chapter outlines the institutional framework and provides details about roles and responsibilities of key individuals and their institutional responsibilities for preparation of LAP.

## **11.1 Appointment of Cadre Post of DILR for Updating Land Records for Base Map**

### **Appointment:**

The Urban Development and Urban Housing Department (UD&UHD) should create a cadre post of the DILR within department with sanction of the State Government. This cadre post should have the power of land revenue code for land record updating and related work equivalent to DILR.

The Land record officer in consultation with the settlement commissioner should appoint Inspector of Land records (ILR) not below DILR rank at Urban Development Authorities and at regional offices of TPVD under ACTP of all different regions for ADAs and other smaller authorities to verify, update and certify land records and base map for Local Area Plan.

### **Roles & Responsibilities:**

- DILR should have the power and functions similar to that of the settlement commissioner.
- The Land Record officer should overall manage the appointments of Inspectors of Land records for UDAs and ADAs. He/She should also advise the ILR's to verify, update and certify land records and base map for LAP.
- Inspector of Land Records (ILR) at UDA's and ADA's should verify and update all the land records and maps of the particular LAP and consult land owners as required for the changes in their records.
- Inspector of Land Records should help the authority with all the updated data related to ownership for preparation of the Final Base Map.
- Authority should give notice in the newspaper to invite the land owners and beneficiaries to verify their plot ownership, shape and size in the draft base map and records prepared by the DILR and should prepare Final Base-map and ownership and area statement with the help of the DILR.



## 11.2 Appointment of Advisors or Domain Experts during Preparation of Draft LAP

### Appointment:

The authority may appoint a set of advisors to advise at various stages of preparation of draft LAP such as Delineation of LAP boundary, preparation of Base Map, Preparation of draft LAP for publication and submission to the state government, public consultation process etc.

Advisors should be experts from the following Domains: Infrastructure planning, Transport planning, housing, Valuation, environmental expert, Geohydrology, Health and education, etc. along with the experts from renowned institute from private or government organizations having knowledge of urban planning and urban design, as may be required.

### Roles & Responsibilities:

- Base map prepared by the survey agency, ILR and the authority should be scrutinized by the advisors for finalization.
- The authority may seek advice from the advisors for finalizing the area delineated for LAP.
- The authority may seek advice from the advisors for initial preparation of concept for LAP.
- The authority may seek advice from the advisors for preparation of Draft LAP for publication inviting suggestions and objections.
- The authority may seek advice from the advisors on the final draft prepared after receiving objections and suggestions from the persons affected by LAP before submitting the Draft LAP to the State for approval.
- The advisors should provide suggestions & recommendations for the improvement of LAP.
- The advisors as domain experts should give inputs and recommendations for proposals and projects related to their expertise as required. For example the environment expert can ensure whether the nalas/ natural streams, water bodies, forest lands are addressed properly in the LAP proposals.
- After the owners meeting, the authority should do the necessary modifications as suggested by the owners and advisors should give final suggestions if any before submitting the same to the UDA board for approval.
- The advisors should give inputs for preparation of the LAP Report.

## 11.3 Appointment of Expert Review Committee (ERC)

### Appointment:

The State Government should appoint an Expert Review Committee (ERC) in Urban Development & Urban Housing Department (UD&UHD) to review the Draft LAP before Sanctioning. [Refer Chapter 10.5]

The Expert Review Committee (ERC) should consist of:

- Chief Town Planner as a Chairman
- Senior Town Planner appointed at the appropriate authority preparing the LAP
- Advisors or Domain experts appointed by the authority at various stages of preparation of LAP

### Roles & Responsibilities:

- The ERC should review the submitted Draft LAP and if necessary, recommend modifications in the same.
- After review, if found satisfactory, the ERC should recommend sanctioning of the LAP. Alternatively, if necessary, the ERC may recommend the authority to reconsider specific contents of the draft LAP.
- On receipt of the LAP, the ERC should review the same for necessary action. ERC should submit its opinion to the State Government with detail report. Considering the report of the ERC, the State Government should by notification sanction the draft LAP with or without modification or refuse to give sanction.

## 11.4 Appointment of Local Area Plan Coordinator (LAP Coordinator)

### Appointment:

The Authority should appoint a LAP Coordinator for the entire process of Preparation and finalization of LAP.

### Qualifications:

- The Authority can identify any person holding the full time masters degree in urban planning from renowned institutions and with more than 5 years of relevant planning experience working on statutory plans such as Development Plans, Town Planning Schemes or Local Area Plans.

### Duties & Functions:

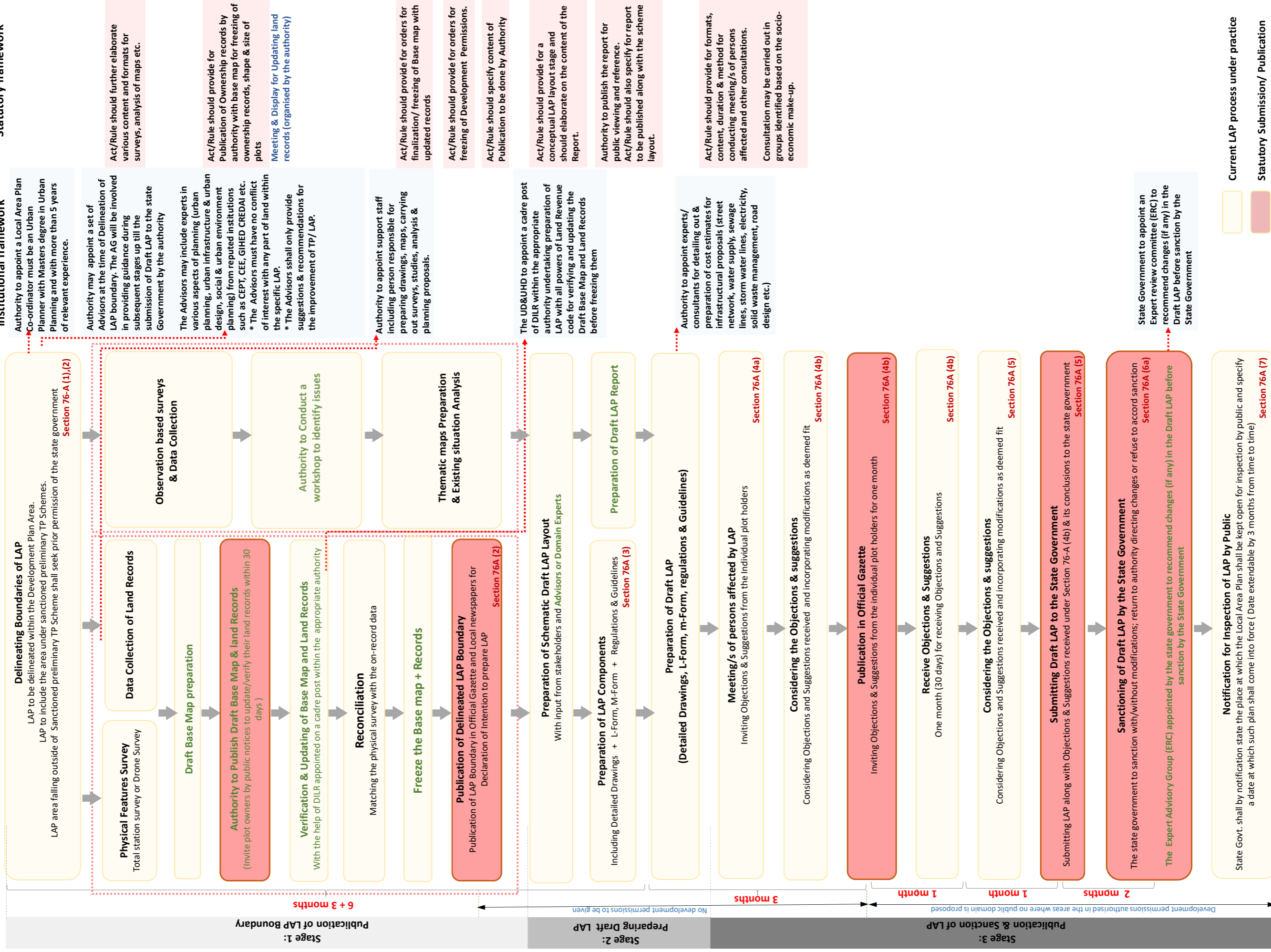
- The LAP Coordinator should assist the authority in all aspects of preparation of Local Area Plan as described in the Act, including delineation and publication of the LAP boundary, managing the survey and base map preparation process, existing situation analysis,

planning and designing of LAP along with regulations for the implementation and preparing the draft LAP. The LAP Coordinator should also carry out the statutory process for the appropriate authority upto the sanctioning of LAP by the state government.

- **Invitations for Meeting of persons affected by LAP:** LAP Coordinator should give notices in prescribed manner and in the prescribed form to the persons affected by the LAP, inviting them for **“meeting or meetings of persons affected by LAP”** as prescribed under the Section 76A 4(a) of GTPUDA 1976.
- **Considering Suggestions and Objections:** The LAP Coordinator should carry out the public consultation process during the aforementioned meeting of persons affected by LAP and should record all suggestions and objections raised during such meeting and present these to the Authority and/or AG as prescribed under Section 76A 4(a) of GTPUDA 1976.
- The LAP Coordinator, upon the approval of the authority, should publish the draft LAP in the official gazette inviting suggestions and objections in writing from persons affected by LAP within period of 30 days from the publication, under Section 76A ( 4)(b).
- The LAP Coordinator should officially record and consider all suggestions and objections received from the persons affected by the LAP.
- The LAP Coordinator should present the list of suggestions and objections to the authority for taking decisions regarding incorporating them in the Draft LAP before submitting it to the State government under Section 76A ( 5).
- After sanctioning of LAP by the state government under Section 76A ( 6), the LAP Coordinator should demarcate the areas allotted to, or reserved for any public purpose, or for purpose of the appropriate authority at the location.

*Page Intentionally Left Blank*

# RECOMMENDED LOCAL AREA PLAN MECHANISM



Flow Chart 2: Recommended Local Area Plan Process

*Page Intentionally Left Blank*

# 12.

---

## Implementation of LAP and Cash Flow Management

- 12.1 Budgetary Provision for Development Works
- 12.2 What should be Implemented When?
- 12.3 Who should Implement What?

### **Highlights**

- *Implementation of a LAP requires to cover full or partial cost of development and construction of various components, including road, infrastructure, gardens, EWS housing, social amenities etc. This may also requires to identify phasing and to manage revenue flow.*
- *It is recommended that the authority should create a separate account in its own accounting system. This will help it manage and reserve a part of revenue from the LAP for carrying out works within the LAP only.*

## 12.1 Budgetary Provision for Development Works

Implementation of LAP requires construction and development of various components. Cost of some of these components are included in the cost of the LAP. But cost of many components are only partially covered, or not covered in the LAP cost.

Generally, full cost of the following components should be considered in the cost of works (in Form M) and while making budgetary provision for the LAP.

- Construction of physical infra. Such as roads and footpath, street lights, culverts and bridges wherever necessary.
- Construction of water supply system including the overhead tank and water work system if required.
- Storm water drainage system including renovation of existing water tank, drain, nalla, and other water courses, necessary development along the water bodies by providing the open space, green strips, roads or retaining wall as a protection as may require for the protection of development.
- Provision of sewerage system in LAP area. While the LAP provides land for social amenities such as police stations, library, fire brigade etc. the cost of construction should be borne by the respective departments. Also, the plots for school and hospital may be allotted to other government or non-government entities with appropriate terms & condition.
- Similarly, while LAP provides the land for EWS housing, the cost of construction should be paid from other grants or through PPP modes.

Additionally, If required, the authority may also request for grant or for loan for the preparation and implementation of LAP, as per the section 91 & 92 of the GTPUDA,1976

## 12.2 What should be Implemented When?

As per the GTPUD Act 1976, no development should be permitted without the prior permission within the LAP area after publication of the Draft LAP.

[GTPUDA, Section 49 ( 1) (a)]

**Upon sanctioning of Draft LAP:** Demarcation of all LAP roads should be done and possession of the land should be taken by the Authority immediately after approval of the Draft LAP [GTPUDA, Section 48-A ( 1)]. At this stage, all the infrastructure and utilities can be implemented.



All final plots including plots allotted for gardens, social infrastructure, economically weaker section housing, plots reserved for sale by the authority etc. should be demarcated and development on such plots can be permitted by the Authority. At this stage the authority should also issue building permissions to the Final Plots.

Authority may start doing all financial transactions including levy of contributions (betterment charges), paying compensations etc. Borrow funds [GTPUDA, Section 92], create consolidated infrastructure fund [GTPUDA, Section 91-A] etc. to implement LAP infrastructure proposals.

### 12.3 Who should Implement What?

All roads, physical infrastructure, amenities and utilities, gardens and open spaces should be developed by the authority implementing the LAP on its own or through PPP mode. Some popular examples of PPP model include;

- The transfer of responsibility of operation and maintenance of gardens and parks by the appropriate authority to other organization on a PPP basis: e.g. Operation and Maintenance of parks and gardens by AMUL co-operative in case of Ahmedabad, etc.
- The construction and maintenance of rotaries and traffic islands by private investors against the rights to advertise.
- The capital expenditure for construction of roads financed through the incremental contributions made by the plot owners towards development of LAP.

Physical infrastructure for gas, electricity and communication should be developed by the respective companies/ agencies providing the respective services. Different amenities will be developed by different departments of government/authority.

Amenities such as fire stations should be developed by the fire department from its own funding, police stations should be developed by the police department which is funded by the State Government, and the civic amenities such as library, town hall, civic center's etc. should be developed by the Authority from its own funding or PPP mode.

Economically weaker section housing should be developed by the Authority/PPP using funds from different central and State Government's grants and programs.

*Page Intentionally Left Blank*

## Glossary of Terms and Definitions

- **Urban Redevelopment:** It is any new construction on a site that has pre-existing uses. It represents a process of land development uses to revitalize the physical, economic and social fabric of urban space
- **Urban Renewal/ Revitalization:** A comprehensive scheme to redress a complex of urban problems, including unsanitary, deficient, or obsolete housing; inadequate transportation, sanitation, and other services and facilities; haphazard land use; traffic congestion; and the sociological correlates of urban decay, such as crime.
- **Local Area Plan:** A type of Development/ Re-development scheme for Urban renewal, redevelopment and conservation practiced in the state of Gujarat under a statutory urban planning framework of the Government of Gujarat.
- **Transit Oriented Development:** TOD, or transit-oriented development, means integrated urban places designed to bring people, activities, buildings, and public space together, with easy walking and cycling connection between them and near-excellent transit service to the rest of the city.
- **Form Based Codes:** Form based codes (FBC) is a planning and zoning tool that for regulating development using physical form rather than land use as organizing principle for the code. It aims at contributing to better quality of life by fostering predictable built results and a high-quality public realm.
- **Melavni:** The Process of Reconciliation of revenue plots and records with the on-ground status of physical features survey.
- **GTPUDA 1976:** The Gujarat Town Planning and Urban Development Act of 1976, that provides the statutory framework for preparing urban spatial plans including the Town Planning Schemes in the state of Gujarat
- **Land Value Capture:** Land Value Capture refers to a type of innovative public financing, in which increases in land values generated is “captured” through a land related tax or any other active or passive mechanisms to fully or partially fund public investment and also to compensate social-costs resulting from these investments.

*Page Intentionally Left Blank*

# APPENDIX

---

*Page Intentionally Left Blank*

# A1

---

## Data Collection from Various Departments

Before undertaking the preparation of a detailed base map for the LAP area, official land records, maps and layouts need to be collected from various concerned authorities and from other relevant sources. The majority of this data should be available with the authorities/ urban local bodies from the F-Forms prepared for the respective TP Schemes falling within the LAP Area. However, In the case where T P Scheme is not prepared, such data shall have to be collected from other sources as described below:

Table 1: Maps and Layouts to be collected from the authority

Record Name	Information	Source
7×12 Record (for rural areas),	Name of owners, area of the revenue survey plot, type of tenure, other rights on the plots, information of any kind of acquisition takes place such as road or railway, type of crop grown in the agricultural land and its area	Civic Centers, ROR/ Village Talati, Collector
Property Card (for urban areas) / City Survey No.	Name of owners, area of the revenue survey plot, type of tenure, other rights on the plots, information of any kind of acquisition takes place such as road or railway and the available infrastructure	City Survey Office (CSO)
DSO Record,	Area of revenue survey plot	District Inspector of Land Records (DILR)
Kami Jasti Patrak (KJP) / Durasti Patrak,	Area of revenue survey plot after acquisition of rail or road or canal- any kind of alteration (addition or deduction) made in the area	
Ektrikaran Patrak,	Area of block no (amalgamated revenue survey plots)	
Puravani Patrak	Changes in the area of revenue survey plot after KJP	
Hissa Patrak,	Area of each division (hissa) made in revenue survey plot	
Revenue Village Map,	Revenue Survey nos./block nos., revenue survey plot/block boundary, water body, car truck, fencing, village boundary	
Tippan/ Plot book,	Revenue Survey plot with all sides and internal cross dimensions to generate/ enlarge accurate plot boundary	
Hissa Measurement Sheet/ Hissa Mapni Sheet,	Revenue Survey plot with division marked on the actual shape	
Rail/Road/Canal Measurement Sheet	Alignment of rail/road/canal property line and acquisition from the revenue survey plots for the same	



Record Name	Information	Source
NA Conversions	Revenue survey plot number, Name of owner, and purpose for NA permission.	Collector Office/ Panchayat office
Approved Layout	Layout fitting into the revenue survey plot with main approach and utilities within the plot	Concerned Authority/ District collector office/ Panchayat office)
GIDC Layout	Accurate boundary of GIDC property and land acquisition done on in T P SCHEME area	GIDC
Joint Measurement sheets	Location of oil/gas pipeline and well / Power and High Tension Line (HTL) passing through the revenue survey plot of T P SCHEME area	ONGC /other concerned authority
Topography Sheets	All physical and natural features including Reserved forest areas, Major water Bodies, channels, streams, Nalas etc and contours	Survey of India (Typically available at 1:25000 and 1:10000 scale)
Satellite Imagery and Remote Sensing (if required)	Physical features, soil type, Ground Water etc.	Data from BHUVAN, NRSC, ISRO, etc. as per the requirements.

*Page Intentionally Left Blank*

# A2

---

Guidance for Appointment of  
Consultants for Survey and  
other Assistance.

Recognizing that different authorities have different levels of in-house technical capacities, and they may or may not have the immediate availability of capable technical team to ensure timely delivery of LAP; an authority may appoint consultants or contractors including experienced Town Planners/ Land Record officers who is or has worked in the relevant Government departments to assist with various technical tasks and aspects of LAP.

Based on the need, the authority may appoint consultants or contractor for providing technical assistance for any of the various tasks preparing draft LAP:

- Topographic survey
- Preparation and finalization of base map after approval by DILR
- Carrying out other relevant surveys and mapping for existing situation analyses, including assessment of environmentally sensitive features, seasonal water bodies, low lying areas, watershed connectivity, ground water level and quality etc.
- Preparing vision, concept and schematic layout considering the purpose, the context, DP provisions, impacts of other plans and proposals etc.
- Assisting authority in determining cost of LAP for preparation of Cost Estimation Form
- Assisting authority in preparation of Owner's Contribution Form
- Preparing components for Draft LAP including LAP Maps (showing existing plot boundaries, proposed plot boundaries, proposed road network, water bodies and plots identified for social amenities, infrastructure, gardens and open spaces, EWS, For-Sale plots etc), Forms and LAP Report.
- Assisting the authority in stakeholders meeting, owners meeting, publication, inviting and reviewing suggestions and objections etc.
- Modifications in the LAP for submission of the draft.
- Assisting authority in preparing presentation for the state government / ERC, providing necessary information to LAP Coordinator, Government or ERC as required up to submission for sanctioning of final LAP.

The authority should appoint such consultants for above purpose through an RFP clearly stating the scope of work and terms or reference. The evaluation criteria must include higher weightage/marks for technical criteria to select technically competent consultant/team of consultants to carry out the identified scope of work and terms of reference.

# A3

---

## Guidance for Survey Methods

- 3.1 Total Station Survey
- 3.2 Drone Survey

In order to do the Physical features survey traditional methods such as Total station survey can be done as well as newer methods such as the Drone Surveys can be done for capturing high resolution 3D imagery. If required, survey of India Maps as well as remote sensing data through satellite Imagery may also be used to verify/ refine the outputs from the surveys conducted.

### 3.1 Total Station Survey

If surveys are carried out through total station survey then below is the methodology for the same:

#### Topography Survey:

To prepare a detailed physical layout of LAP area is the most vital step in the preparation of cadastral plan. An accurate base map requires accurate survey. Detailed survey for LAP broadly consists of following stages:

1. **Benchmark Transfer:** Benchmark transfer is a process by which location of scheme area and its level (R.L), with respect to Survey of India's benchmark (G.T.S= Great Trigonometrically survey of India) or permanent benchmark is established. It establishes difference of level of two points (GTS and Temporary or Traverse point.)
2. **Traverse:** A survey traverse is an imaginary line consisting of an orderly sequence of points marked permanently on the earth surface. A detailed survey begins along any of these points to close back again at any one of these points. Particularly, for projects like the LAP, traverse should be made to close accurately. The procedure allows errors to be detected and also puts a check on the accuracy required for the survey. A closed traverse begins and ends at the same point.
3. **Mapping Physical objects and land within LAP area (Detailed survey):**
  - **Built structures:** Pucca, kuchha and temporary structures (with internal divisions), factory sheds, building under construction, plinth, compound walls, fencing and gates.
  - **Environmental Features:** Small and big trees, plantation, vegetation, water bodies, lakes, water channels, river and wells.
  - **Utility:** Water tank, bore wells, hand pumps, water taps, water supply lines, water kundi, open drains, high tension lines, electric box, electric lines, electric poles, electric transformers, light poles, telephone poles, telephone box, manholes, soak pits, drainage lines, culvert and cross drainage
  - **Transportation:** All paved or unpaved roads including

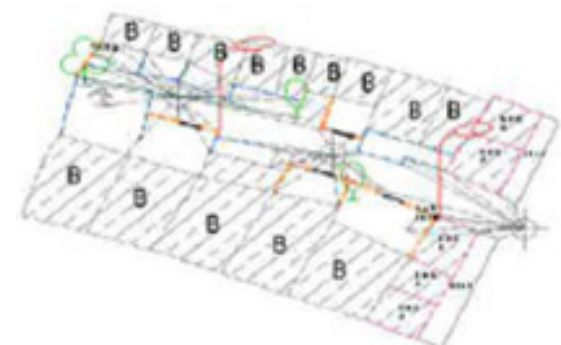


Figure A3\_1: Various Stages of Total Station Surveying

pucca and kuchha roads and paths

- **Agricultural Land:** Bunds and stones
- **Land use:** Residential, commercial, open space (playground, burial ground, agricultural land), religious, institutional, educational, utility, transportation and water-bodies.
- **Building height:** Basement, ground and above
- **Contour:** Survey drawings should be mentioned with contours at two different levels- at 50 cm interval and at 100cm interval.

4. **Preparing computerized drawing:** After the detailed survey of the existing features on the site, a computerized map is created by putting all the above details in their respective layers, line type and color coding.

5. **Site checking:** After preparing the draft base map with the survey, the distance between the random points of different existing features is checked to ensure the accuracy of the survey.

- Co-ordinates of Traverse point
- Cross reading
- Location of Station points (physical object) like trees, electric poles, telephone poles, bore wells, wells, manholes, water taps, soak pits, septic tanks, stone pegs etc.
- Location of permanent structures
- Location and angle of property lines, electric lines, hedges, bunds in agricultural fields, compound walls etc.

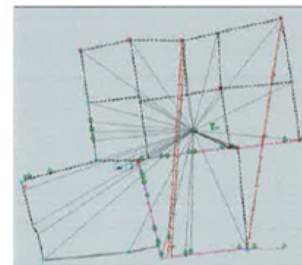
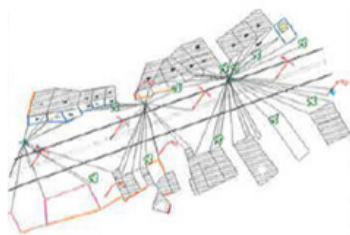
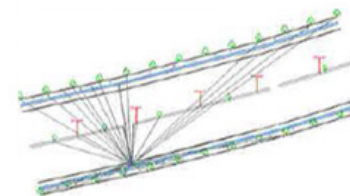


Figure A3\_2: Various Stages of Total Station Surveying

## 3.2 Drone Survey

### 1. Establishment of Ground Control Points (GCP)

GCP on site for conducting topographical survey of project area should be established. Further, GCP's are established on permanent structure ensuring plane surface and clear visibility from sky for drone survey. Existing features such as HT Line, trees etc. are considered while establishing GCP. In total eight GCP's are established.

Further, the static reading of each established GCP should be taken for at least 45-60 minutes using DGPS to ensure higher accuracy. The base station should be established at the top of the permanent structure for conducting survey of permanent structures which can be used in future. Afterwards, the existing permanent structures such as pakka house, temple, HT Line etc. should be surveyed. The figure below shows the photos for base station and survey conducted prior to commencement of Drone survey.



Figure A3\_3: Aerial Triangulation in Drones

### 2. Conducting Drone Survey

Unmanned Aerial Vehicle (UAV), popularly known as Drone, is an airborne system or an aircraft operated remotely by a human operator or autonomously by an onboard computer. Drone mapping is done using a technique called photogrammetry. Generally, photogrammetry refers to taking measurements from imagery that is captured by drones, airplanes or satellites. A typical photogrammetric technique is called Orth-rectification, which refers to removing the effects of image perspective (tilt) and relief (terrain) effects, resulting in a plan metrically correct image with a constant scale that shows all features in their correct location.

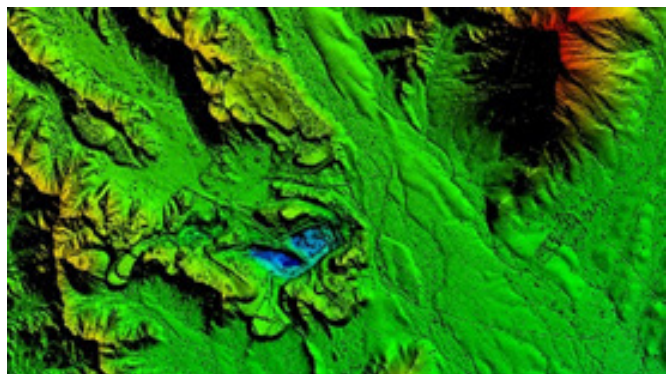


Figure A3\_4: High resolution drone image for mapping of large areas

The main outputs of photogrammetric surveys are raw images, Orth-photo-mosaics, digital Surface Models and 3D point clouds. These outputs contain large quantities of images that are combined and processed using specialized photogrammetric software and are used in many different fields for visual assessment purposes, including topographic mapping, architecture, engineering, urban planning and cultural heritage.

The drone flight path is prepared using CW Drone Control software that enables an unmanned drone to follow a pre-defined flight path to make sure the whole area is covered. Also, it is ensured that a minimum 60% amount of overlap between the imagery is reached so that the imagery can be stitched together using CW Drone Control software to produce an orthophoto.

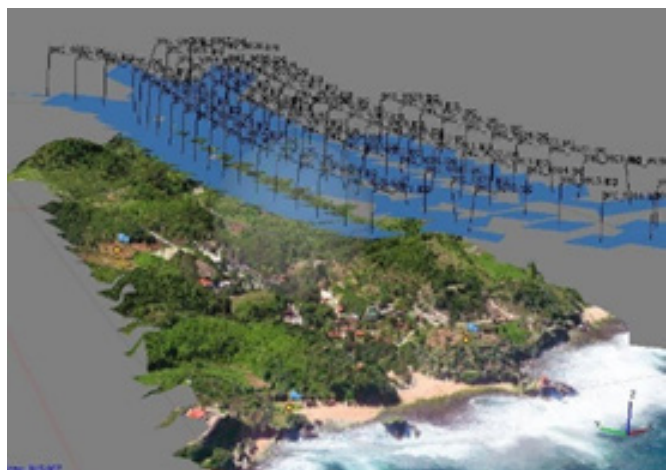


Figure A3\_5: Ortho-photo-mosaics image

The drone survey is conducted after setting up flight path and altitude for drone to fly. The image should be captured by high resolution camera.



### 3. Image Processing

Image processing is a method to convert an image into digital form and perform some operations on it, in order to get an enhanced image or to extract some useful information from it. Usually Image Processing system includes treating images as two-dimensional signals while applying already set signal processing methods to them. The conversion is followed to be in different steps, they are captured image-Scanning of multiple image-Rectification of image-stitching and mosaic of images-conversion of images.

**Captured images:** These images are in the 2d platform with the correction of the latitude and longitude errors. In this the images are been in multiple mode, that itself select the clear image for the rectification.

**Scanning of multiple image:** Scanning in the sense the images are in the mode of scanning to select the clear image from the multiple images. This scanning itself eliminates the blurred images and it is thoroughly verified. Rectification of images - In this the images are rectified along with the clear image. The inclination images are matching with one another and it corresponds to the original image. Likewise, entire marked area is evaluated and rectified under this process.

**Stitching and mosaic:** The aerial images are scanned and verified with the pattern rectification. Now the images are to be stitched and mosaic by the merging process. It meant that the entire marked area is to be mosaic and the stitched image is valued.

**Conversion of image:** The images are converted by stitching and mosaic process

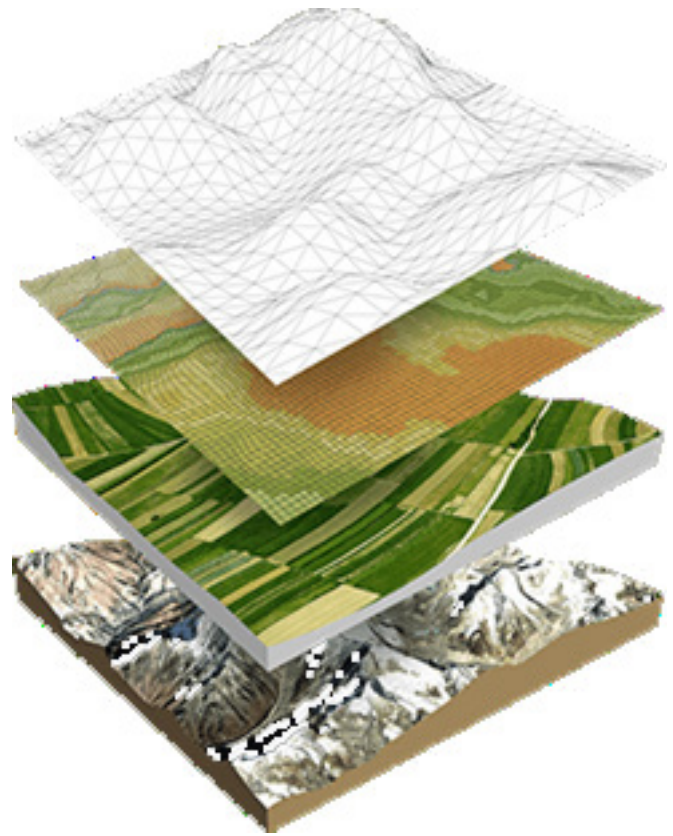


Figure A3\_6: layers for image processing in drone

*Page Intentionally Left Blank*

# A4

---

## Case Studies of Various Local Area Plan Mechanisms

- 4.1 Ireland
- 4.2 Bhutan
- 4.3 Maharashtra
- 4.4 Delhi
- 4.5 Madhya Pradesh
- 4.6 Kerala

## 4.1 Ireland

### Local Definition:

Local area plans provide detailed planning policies for areas where significant development and change is anticipated, without having to prepare very detailed local planning policies and objectives for many specific areas within city and county development plans.

Within the context of proposed reforms under “Putting People First - Action Programme for Effective Local Government” to the establish new Municipal Districts, the local area plan process is particularly focused on planning at local level.

### Objectives of LAP in Ireland:

- Local area plans are intended to provide more detailed planning policies for areas that are expected to experience significant development and change, through proper public participation and democratic oversight.
- Local area plans must focus on delivering quality outcomes informed by effective participation of local communities in preparing the plan and the wider planning policy.
- Local area plans are also important policy instruments in securing rejuvenation of city and town-centres and protection of environmental qualities, including biodiversity.
- Local area plan must identify the mechanisms that will secure the implementation of the necessary physical, social and environmental infrastructure required to achieve the objectives of the plan.

### Statutory Provision:

The Planning and Development Act 2000 introduced the concept of local area plans within the framework of higher-level plans (such as Regional Planning Guidelines and City and County Development Plans) (Refer Fig. A4\_3)

Since 2002 many counties’ local municipal bodies started preparing LAPs for greenfield as well as brownfield areas in their respective authority’s areal

As per the records of 2013, more than 350 such Local Area Plans (LAPs) been prepared. Many of them already been sanctioned and implemented successfully.



Figure A4\_1: Planning framework of Ireland

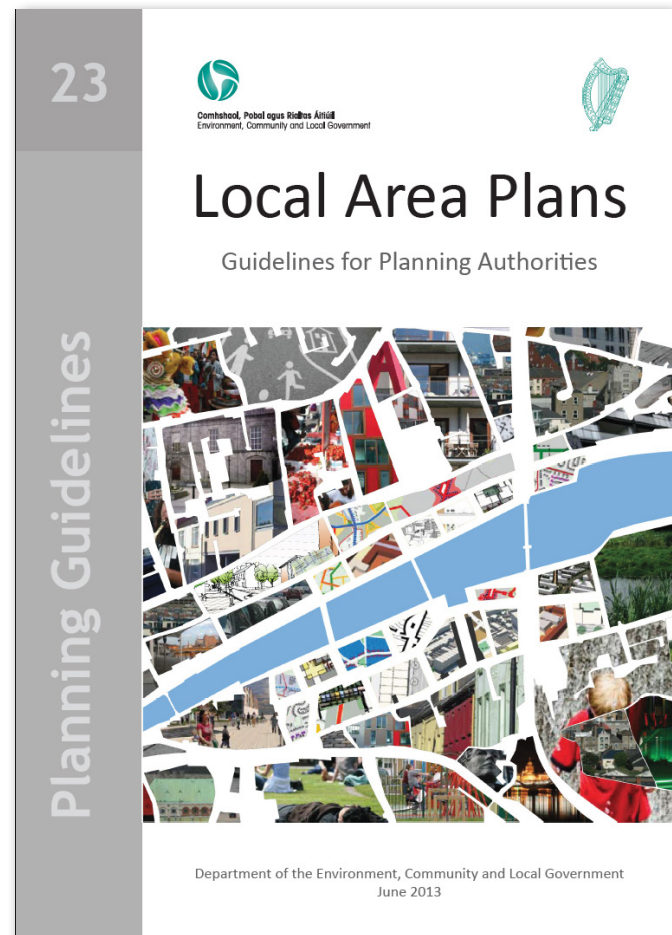


Figure A4\_2: LAP Guidelines for Planning Authority Document

[2000.] *Planning and Development Act, 2000.* [No. 30.]

(6) Where any existing development plan contains any provision relating to the preservation of a public right of way, the provision may be included in any subsequent development plan without the necessity to comply with this section. Pr.II 5.14

(7) (a) Nothing in this section shall affect the existence or validity of any public right of way which is not included in the development plan.

(b) The inclusion of a public right of way in a development plan shall be evidence of the existence of such a right unless the contrary is shown.

15.—(1) It shall be the duty of a planning authority to take such steps within its powers as may be necessary for securing the objectives of the development plan. General duty of planning authority to secure objectives of development plan.

(2) The manager of a planning authority shall, not more than 2 years after the making of a development plan, give a report to the members of the authority on the progress achieved in securing the objectives referred to in subsection (1).

16.—(1) A planning authority shall make available for inspection and purchase by members of the public copies of a development plan and of variations of a development plan and extracts therefrom. Copies of development plans.

(2) A planning authority shall make available for inspection and purchase by members of the public copies of a report of a manager of a planning authority prepared under sections 11(4), 12(4) and (8) and 13(4) and extracts therefrom.

(3) Copies of the development plan and of variations of a development plan and reports of the manager referred to in subsection (2) and extracts therefrom shall be made available for purchase on payment of a specified fee not exceeding the reasonable cost of making a copy.

17.—(1) A document purporting to be a copy of a part or all of a development plan and to be certified by an officer of a planning authority as a correct copy shall be evidence of the plan or part, unless the contrary is shown, and it shall not be necessary to prove the signature of the officer or that he or she was in fact such an officer. Evidence of development plans.

(2) Evidence of all or part of a development plan may be given by production of a copy thereof certified in accordance with this subsection and it shall not be necessary to produce the plan itself.

## CHAPTER II

### Local Area Plans

18.—(1) A planning authority may at any time, and for any particular area within its functional area, prepare a local area plan in respect of that area. Local area plans.

(2) Two or more planning authorities may co-operate in preparing a local area plan in respect of any area which lies within the combined functional area of the authorities concerned.

(3) (a) When considering an application for permission under section 34, a planning authority, or the Board on appeal,

## Preparation of LAP:

As per the Section 18 ( 1),( 2) of the Planning and Development Act, 2000 “Planning Authority” may prepare LAP for the functional area under the administration of the authority.

In local administrative structure of Ireland planning authority refers to the following;

- County : Council of the County ( eg: Louth County Council )
- Borough (Town/district of the city) : Corporation of Borough( eg: N.A. Desolved )
- Urban District : Council of the Urban District ( eg: Dublin City Council )

It is necessary for the planning authority to prepare Draft LAP in consultation with the local community, stakeholders and interested bodies.

## Methodology of adopting LAP:

There are two key phases in the process of making a local area plan:

A **non-statutory background data gathering process**, where data and information(evidence) essential to preparing the local area plan is assembled including information on population, employment, economic development, physical and social infrastructure, heritage, flood risk assessment etc.; and

**The statutory process** – as set out in the legislation with its various elements of statutory notices, issues papers, draft, amended draft and final documents.

Both the Phases are time bound as per the act and is as follows (Refer Fig. A4\_4)

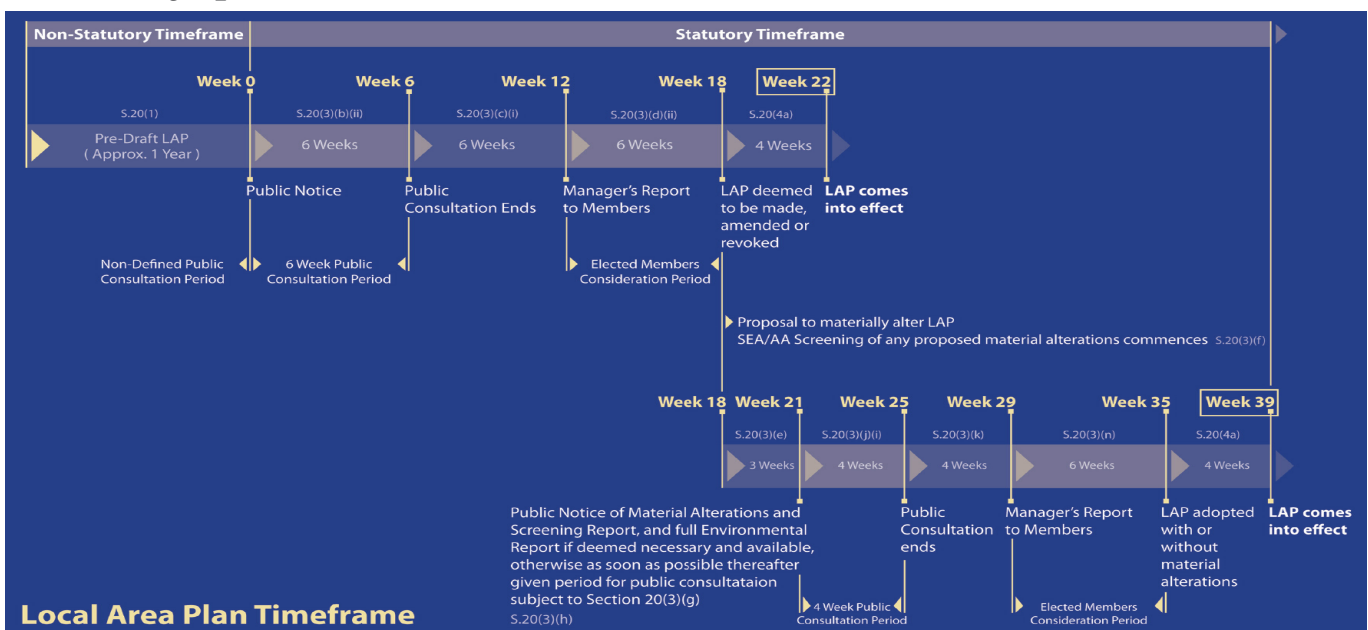


Figure A4\_4: Indicative Time Frame for Preparation (to coming into the force) of LAP

## Approval of LAP:

As prescribed into above shown flow chart, after receiving the consultations from the public participation, planning authority will submit the final report (with or without considering suggestions from the consultation) to the elected members of the local council for their considerations. **Elected Members of council gets 6 weeks time to review and sanction.** After 6 weeks time, submitted LAP gets adopted with or without modifications suggested. **And 4 weeks after adopted date of LAP, It comes into effect.**

### Local Area Plan

#### Section 4 – Area Wide Strategies

##### 4.1 Introduction

The future development framework of the South Docks area is illustrated in Figure 4.1 below. Following the principles set out in 2.4 above, this Plan promotes the sustainable development of the area, identifying optimum land uses and appropriate public and urban realm improvements throughout the area. This section of the Plan identified these objectives and policies that apply to the entire area, with Precinct-specific strategies located in Section 5.

This section is structured as follows:

- ◊ Zoning Objectives
- ◊ Access
- ◊ Mobility Management
- ◊ Proposed Land Uses
- ◊ Social and Community Facilities
- ◊ Conservation Strategy
- ◊ Proposed Build Form and the Public Realm
- ◊ Public Realm, Landscape and Open Space
- ◊ Key Infrastructure Improvements
- ◊ Sustainability

Figure 4.1 South Docks Development Plan

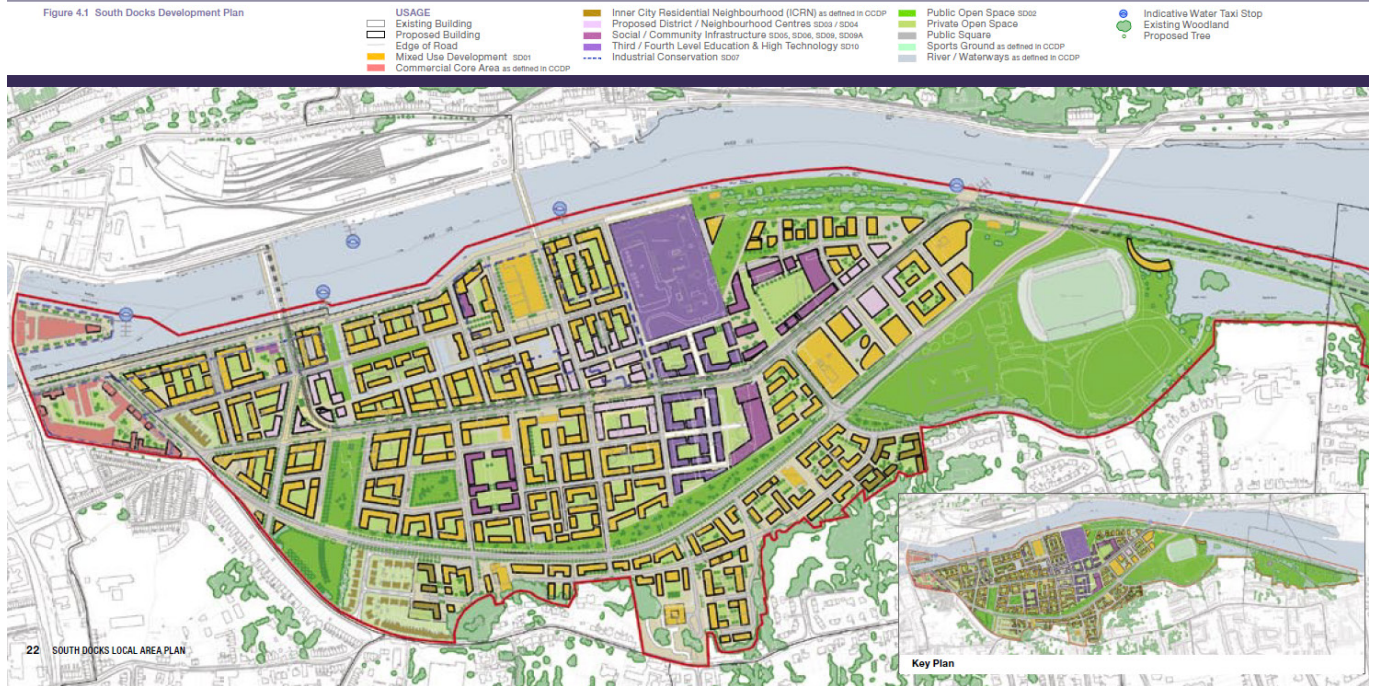


Figure A4\_5: Example of LAP: Masterplan of Southdocks LAP, City of cork, Ireland,

## 4.1 Bhutan

### Local Definition:

Local Area Plans are detailed spatial/physical plans, which presents proposals and solutions at the local level.

The LAPs are prepared to help translate and implement the visions of the structure plan, while also considering the specific local contexts. (micro scale implementation mechanism to achieve larger goals set by the Structure Plan). The new layout for LAPs considers efficient vehicular and pedestrian access to public amenities, located within a comfortable walking distance from a transportation halt, within a neighbourhood node.

### Objectives of LAP in Bhutan:

- Core objective of LAP in Bhutan is to carry out the **Land Pooling instead of the Land acquisition** for the planned development in the greenfield sites and regeneration and rejuvenation for the brownfield sites.
- Rationalizations of the existing plots were proposed, which draws on the principles of Land Pooling and Readjustment.
- The LAPs are prepared based on an analytical assessment of the existing situation, looking into aspects such as the present land use pattern, buildings, land holdings, and infrastructure layouts.
- The topography, surface hydrology, and natural environment also help shape the plan.

### Statutory Provision:

As per the **Bhutan Municipal Act 1999, Section 70**; municipal corporation (thromde) should prepare the urban development plan. Using this provision, in early 2000 Thimphu Thromde announced preparation of Thimphu Structure Plan (for 25 years) and subsequent LAPs as micro-level implementation.

Lungtenphu Local Area Plan is the earliest implemented LAP in 2004. Since 2002 many municipalities have prepared LAPs such as Thimphu Thromde prepared 14 LAPs until now and many of them are at different implementation stage. Phuentsholing thromde prepared 11 LAPs and many of them are at different implementation stage.

### Preparation and Approval:

After the major reforms in national administrative and political structure, new act; Local Government Act, 2009 implemented which detailed out the duties of municipalities and elaborated on the aspects of Structure Plan and Local Area Plan.



Figure A4\_6: Planning framework of Bhutan

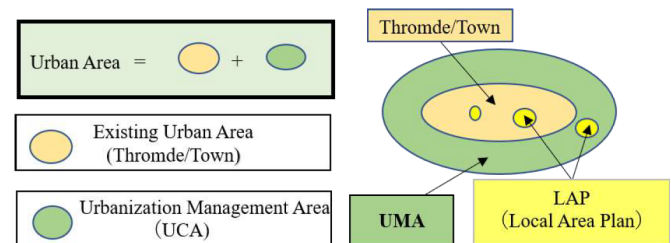


Figure A4\_7: Urbanisation Management Control Area Concept of Bhutan

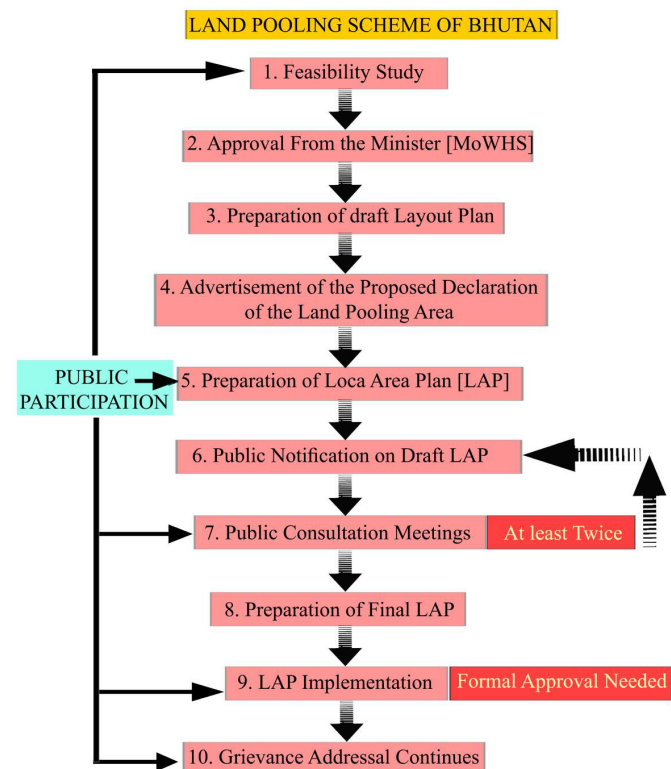


Figure A4\_8: Process and Stages of Bhutan Land Pooling Mechanism



As per the Local Government Act of Bhutan, 2009, Section 273(a); **Thromde (municipality) administration should prepare the LAP and submit it to the municipal council/ corporation’s approval committee for sanctioning the proposed LAP.**

**Powers and Functions of Thromde Administration**

- 272. There shall be Thromde Administration for a Thromde staffed by civil servants or other employees.
- 273. The Thromde Administration shall:
  - a) Formulate local area plans and priorities in respect of the Dzongkhag Thromde and submit to Thromde Tshogde for approval;
  - b) Promote planned development and appropriate land use, control of squatter and illegal settlements and regulation of commercial activities;
  - c) Approve building drawings in accordance with codes, standards, laws and rules;
  - d) Protect and improve the city’s environment, and in particular, control noise pollution, regulate parking, protect parks, trees and plantations;

The Local Government Act of Bhutan, 2009

58

Figure A4\_9: The Local Government Act of Bhutan, 2009

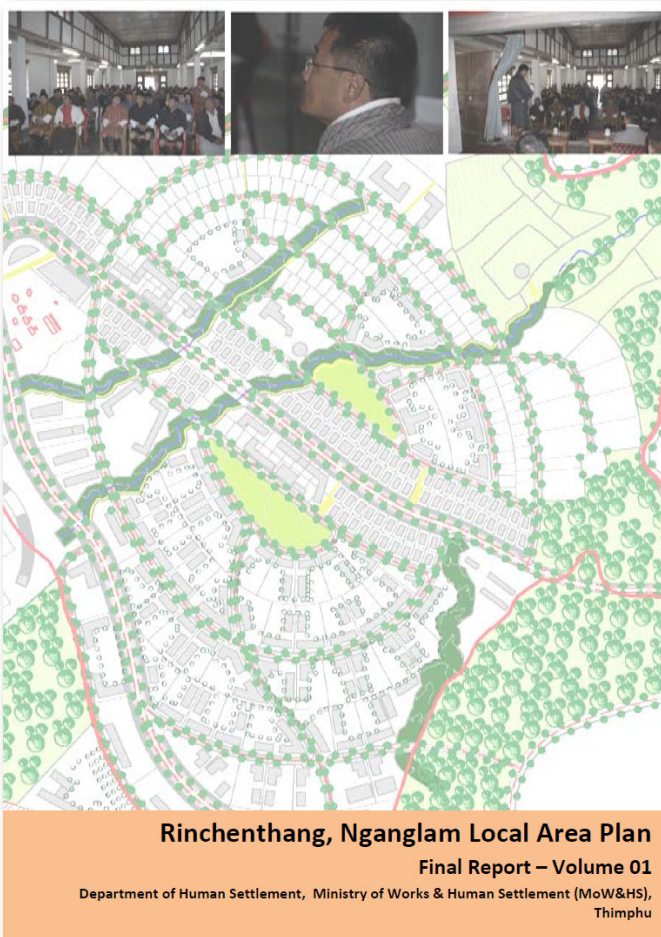
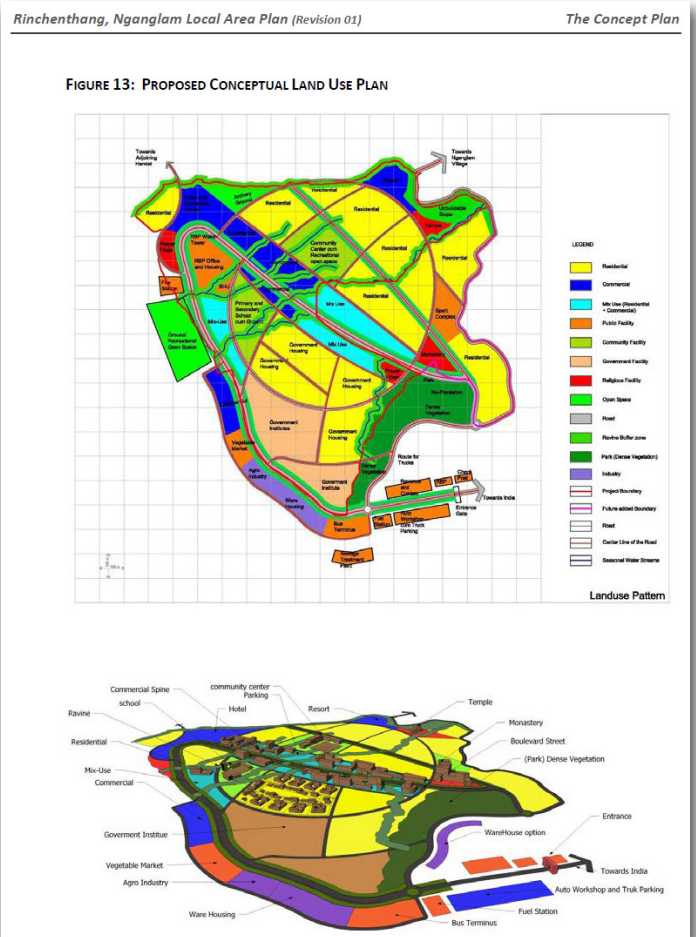
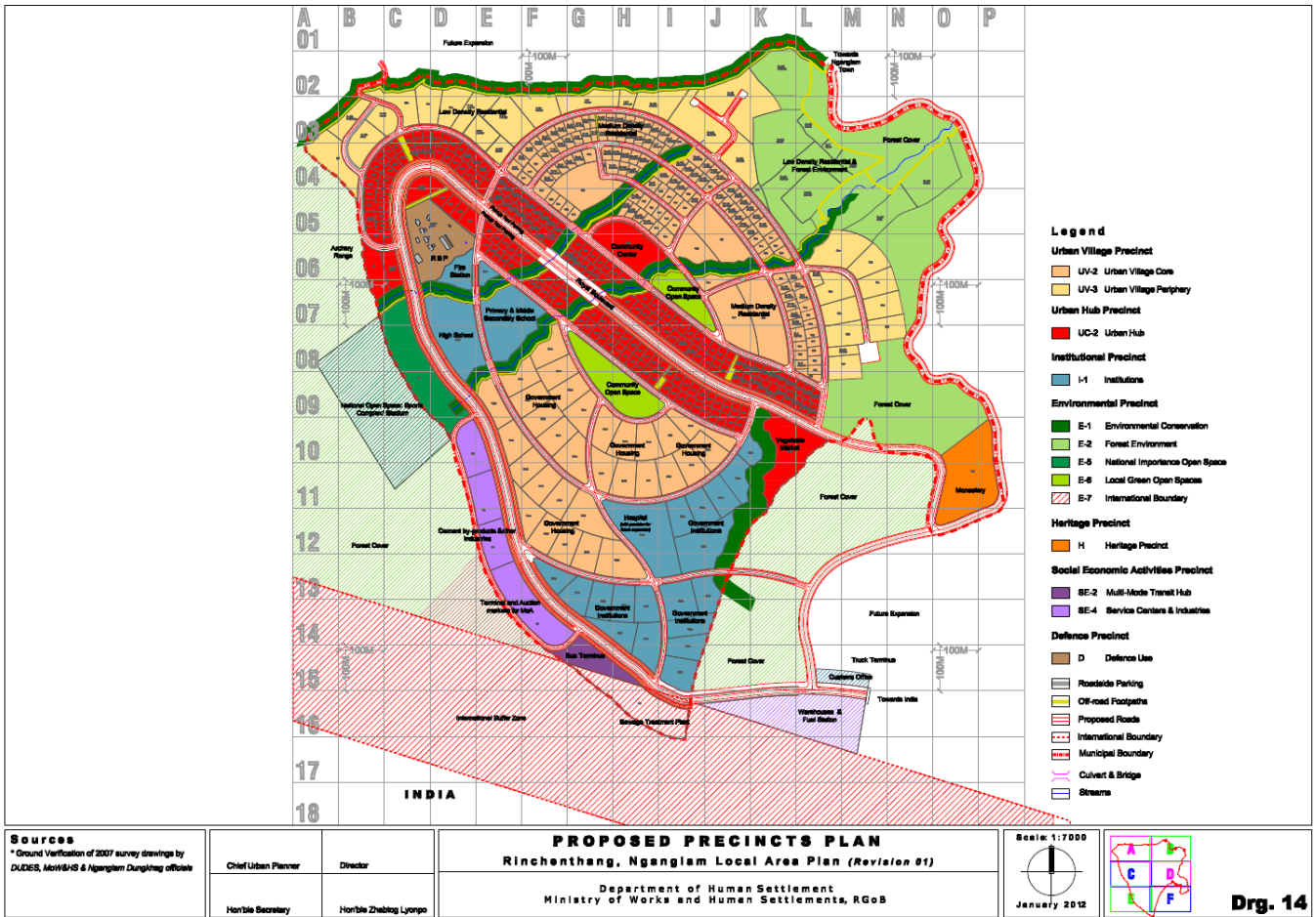
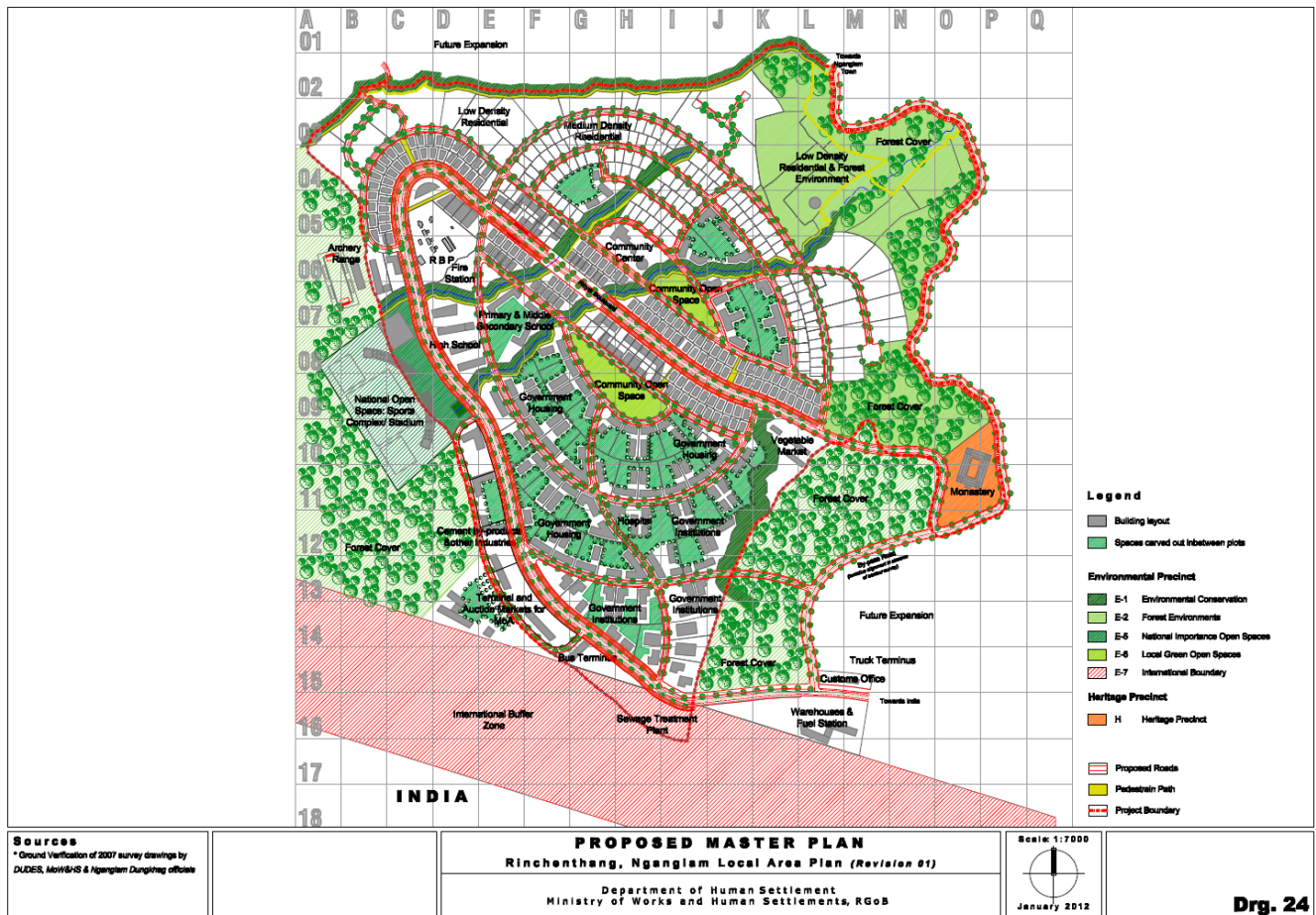


Figure A4\_10: Example of LAP in Bhutan





**Drp. 14**



**Drp. 24**

Figure A4\_11: Sample Drawings of LAP in Bhutan

### 4.3 Maharashtra

Similar to the Gujarat, The planning act of the State of Maharashtra also includes provisions for DP-TP Mechanism. Maharashtra state also has a provision for preparing Regional Plans.

Currently, however, there is no clear provisions for preparing LAPs in the MR&TP Act, 1966. Section 40 of MR&TP Act, 1966 enables the government to constitute the Special Planning Authority (SPA) for notified areas. Such Special Planning Authority (SPA) are responsible for planning and development of the notified areas.

Under the provision of Section 115 of the MR&TP Act, 1966; SPAs can prepare and submit such proposals to the state government for approval.

Based on Section 40 & 115 of the MR & TP Act, 1966; MMRDA (Mumbai Metropolitan Region Development Authority) was assigned as SPA for various (below mentioned) projects in Mumbai Region. All the projects are different in terms of the type of project, nature of development, and impacted areas.



Figure A4\_12: Planning framework of Maharashtra

Table 2: Special Planning Areas under MMRDA

Sr. No	Special Planning Area	Year of Appendment	Project Area (in Ha)
1	Bandra Kurla Complex (BKC) [Example of infill development]	1977	370
2	Proposed Growth Centre in Kalyan Taluka	2006	1089
3	Kalyan Complex Notified Area (KCNA)	1976	16662
4	BackBay Reclamation Scheme (BBRS)	1983	
5	Bhinwandi Surrounding Notified Area (BSNA)	2007	14400
6	Gorai- Manori-Uttan Recreation and Tourism Development Zone (RTDZ)	2010	4313
7	Indu Mill "Grand Memorial of Bharatratna Dr. Babasaheb Ambedkar"	2013	
8	Mumbai (Chhatrapati Shivaji) International Airport Notified Area (CSIANA)	2009	143
9	Oshiware District Centre (OCD)	1992	102
10	Wadala Notified Area	2005	115

### 4.3.1 Development of Bandra Kurla Complex

Bandra-Kurla Complex is being developed to help arrest further concentration of offices and commercial activities in South Mumbai. It provides suitable plots for financial services, information technology and other ancillary services in the Bandra-Kurla Complex.

#### **Background:**

In 1977, the MMRDA was appointed as the Special Planning Authority for planning and development of this complex. It covers 370 ha. area of once low-lying land on either side of the Mithi River, Vakola Nalla and Mahim Creek.

The area had poor surface drainage and was severely affected by pollution in the Mahim Creek. The channelization of 6.0 Km of the length of the Mithi River from Mahim causeway to CST Road Bridge and its tributary Vakolla Nalla was undertaken since 1980's to improve water carrying capacity and reduce pollution. Following the floods of 2005, further widening and deepening took place along with improvement of bed gradient.

#### **Project Features:**

Bandra-Kurla Complex (BKC) is one of the key areas for which MMRDA is the "Special Planning Authority". Today, the complex enjoys a status that is similar to that of Nariman Point. The complex is already providing more than two lakh jobs and is a perfect solution to absorb future growth of offices and commercial activities successfully. The complex has showcased tremendous growth in the changing times and the development of 'E' block is noteworthy.

The Authority has developed 19 hectares of land with the presence of prominent institutions such as the Reserve Bank of India, Income Tax, Sales Tax, Provident Fund and many other corporate and commercial establishments. Together, these buildings offer an office space as large as 1,17,000 sq. mtrs., potential enough to accommodate thousands of jobs. This meticulously planned complex also showcases a City Park which is regularly thronged with people.

Currently, the BKC also hosts 30 kilometres cycle track and corporate headquarters of MNCs. Several companies operate from BKC. The complex has staff quarters, club, 5 Star Hotels, Convention Complex, Diamond Bourse and hospitals apart from offices.





Figure A4\_14: Implimentation of Projects in BKC

### 4.3.2 Plans for Comprehensive Development in Maharashtra

Currently, there is no formal/direct provisions in the MR&TP Act, 1966 for preparing LAPs for brownfield redevelopment. But, (as per local planning experts) **Section 33 (1) of MR&TP Act, 1966 enables the planning authorities to prepare plans to develop or redevelop areas as ‘ Areas for comprehensive development’.**

Under the statutory provision of the above-mentioned section 33( 1) of the act, **Draft Development Plan for Mumbai -2034 added the important proposal for preparing LAPs for the ward levels.**

But, the various expert and prominent stakeholders of the city were not in the favour of adding provisions to prepare LAP as Development Plan Proposal.

Experts raised their concerns regarding the details required to draft the LAP and the appropriate time-frame to conduct the background studies & data collection to prepare LAP.

Since, such detailed procedure to prepare LAP were not backed-up by the statutory provisions in the MR&TP Act, 1966 almost after 1 year, BMC dropped the idea to prepare LAPs and removed it from the REVISED DRAFT DP-2034 for Mumbai. (refer next slide)

Major Reasons stated to do so were,

- Preparing LAPs is time consuming process &
- Lack of administrative structure to handle almost 200 LAPs for the Mumbai City

**Plans for areas of Comprehensive development.** **33. (1) Any time after <sup>1</sup>[the publication of notice regarding preparation] of draft Development Plan under section 26, a Planning Authority may prepare plan or plans showing proposals for the development of an area or areas which in the opinion of the Planning Authority should be developed or re-developed as a whole (hereinafter referred to as “the area or areas of Comprehensive development”); and in particular, such plans shall provide for—**

Figure A4\_16: Section 33, Statutory Provisison of Plans for comprehensive Development in MR & T P Act, 1966 of Maharashtra

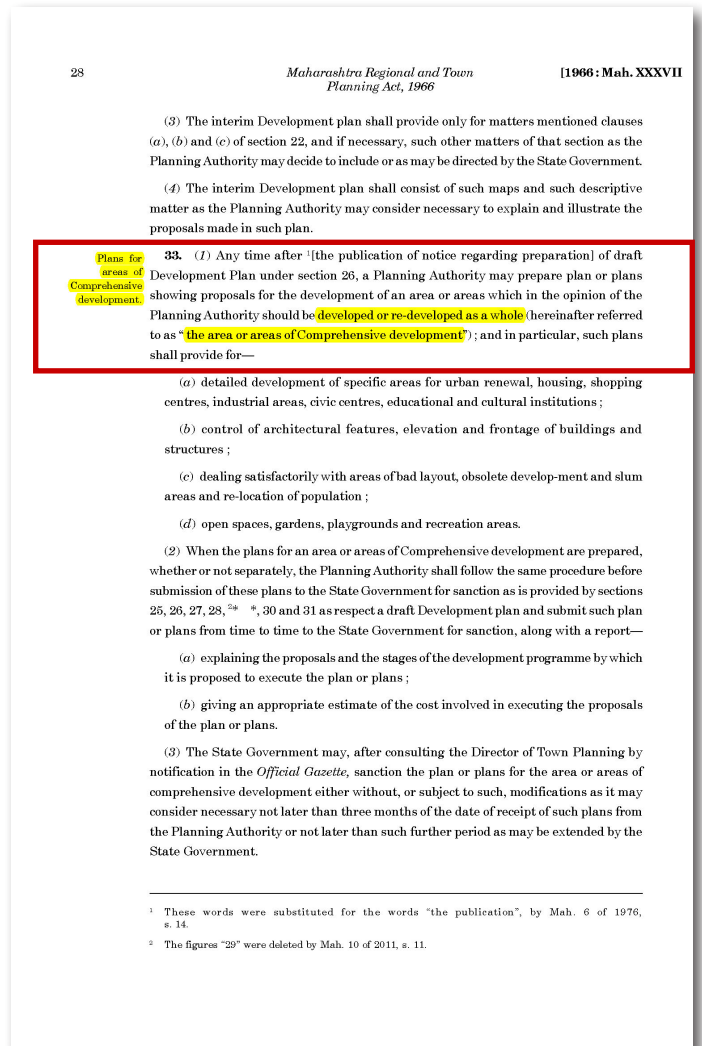


Figure A4\_15: Statutory Provisison of Plans for comprehensive Development in MR & T P Act, 1966 of Maharashtra

## BMC's local area plans: Development of important areas may get stuck, say experts

Local area plans include creating individual, specific and detailed plans for rehabilitation of slums and more.

Written by [Tanushree Venkatraman](#) | Mumbai | Published: March 2, 2015 1:37:13 am

Identifying the need for comprehensive community-based plans, the BMC has introduced the concept of local area plans in its draft development plan (DP) 2034. These plans, will however, follow a similar exhaustive procedure like the DP, delaying development of crucial areas, experts say.

The local area plans include creating individual, specific and detailed plans for rehabilitation of slums, redevelopment of cessed buildings, development of koliwadadas and gaothans, heritage precincts and transit-orient-development zones.

Pankaj Joshi, Executive Director, Urban Design Research Institute (UDRI) said, "BMC took more than five years to draft the DP, the local area plans will take longer with such an exhaustive procedure. The processes outlined are rigorous and time-consuming. And why are only some areas being outlined?"

Apart from specific designs and independent plans for these years, the DP also lists extensive mapping of infrastructure and consultation with citizens at every step of planning.

*Reference: The Indian Express, Mumbai, MARCH, 2015*

Joshi also raised apprehensions on BMC invoking a lesser used section 33 of the Mumbai Regional Town Planning Act, 1956 for undertaking local area plans. "These acts haven't been used in the past 49 years and neither have these areas been developed. Then what is the guarantee now?" he added.

Activists have also raised concerns over BMC not determining a specific time-frame for the implementation of these plans. Aravind Unni, activist from Hamara Shehar Vikas Niyojan (Our City Development Campaign) said, "The areas mentioned under local area plans are the ones that need immediate intervention. The BMC has to specify a timeline, earmark funds for the development of these plans and give ensure a security of tenure. With these plans, BMC has left 20 per cent of the city in limbo."

Activists raised these points at a session with municipal commissioner Sitaram Kunte in the BMC headquarters last week, where they pointed out that BMC also has to undertake an extensive capacity-building programme to undertake the massive exercise of implementing local area plans.

[tanushree.venkatraman@expressindia.com](mailto:tanushree.venkatraman@expressindia.com)

Figure A4\_17: E-News Paper Reporting on LAP in Mumbai\_1

[Home](#) / [Cities](#) / [Mumbai](#) / BMC drops local area plans

## BMC drops local area plans

The LAP includes open spaces, gardens, playgrounds, recreational areas and streetscape design and is important for the city's area-wise development.

By: [Express News Service](#) | Mumbai | Published: June 2, 2016 3:00:32 am

THE REVISED draft of the Development Plan has dropped local area plans for the city's wards, which are a requirement according to the norms of the Maharashtra Regional and Town Planning Act, 1966. The Local Area Plans were included in the earlier draft of the DP.

Under the MR&TP Act, section 33, local area plans would provide for detailed development of specific areas in the form of urban renewal, housing, mixed use development, industrial areas, civic centres, educational and cultural institutions.

The LAP includes open spaces, gardens, playgrounds, recreational areas and streetscape design and is important for the city's area-wise development.

Even though the last draft had noted that the master plan and zonal plans in practice in Delhi were successful, and also that strategic use of local plans in the form of Town Planning Schemes in Ahmedabad were successful, the latest draft of the Development Plan 2014-34 has not included these.

### Lack of Clarity in LAP Process

The BMC has justified dropping them by claiming that the exercise of drawing them up would be a time-consuming, and it would have to 'follow the same arduous and prolonged process as the city-level DP' for it.

### Lack of institutional Capacity

The draft DP states that the civic body does not have the administrative structure to handle the preparation of more than 200 LAPs, adding that such second-tier plans were not taken up in the earlier DPs of 1964 or 1991.

Urban planners like Pankaj Joshi, executive officer of the Urban Design Research Institute, stated that LAPs were one of the good things in the last DP, which have now been left out.

"The city's development plan needs a LAP since an individual ward can include around 1 million people. The 74th amendment of the Act allows the planning authority to devolve powers to local authorities. However, the revised DP has, illogically, completely dropped the provision," he said.

Officials in the DP department argued that they have compensated for the LAPs by preparing detailed ward-level reports that have been included in the draft DP, and that the process of creating LAPs can be initiated if needed.

Figure A4\_18: E-News Paper Reporting on LAP in Mumbai\_2



## 4.4 Delhi

### Local Definition:

Local Area Plan in Delhi means “the plan of a Ward / Sub Zone to be prepared and approved by the concerned local body.” (as defined in MPD-2021, Chapter 17 Clause 2(3))

### Need of Intervention:

As per the DDA Act 1957, Delhi was preparing the Masterplan for the city level plans and Zonal plan and layout plans for micro-level implementations as a mechanism for the urban development. Which was considered as a Top-Down approach towards planning.

Local Area Planning (LAP), was introduced by Master Plan Delhi (MPD) 2021 in order to achieve a better planning process, which is inclusive, participatory and has a bottom-up and top-down approach to make it comprehensive. Thus, LAP also caters to the need to bridge the disconnect between “Zonal Plan” and “Layout Plan”.

It was intended to promote the Decentralized local area planning by participatory approach; Performance oriented planning and development, with focus on implementation and monitoring.

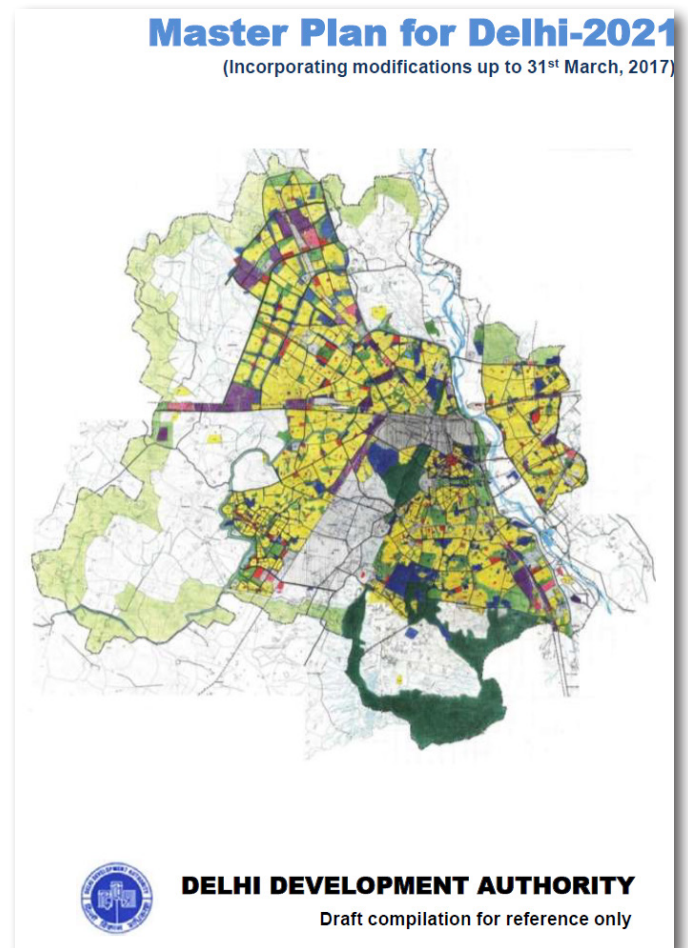


Figure A4\_19: MPD-2021

*MPD-2021 modified upto 31/03/2017*

### MAJOR HIGHLIGHTS OF THE PLAN

18. The Master Plan incorporates several innovations for the development of the National Capital. A critical reform has been envisaged in the prevailing land policy and facilitating public - private partnerships. Together with planned development of new areas, a major focus has been on incentivising the recycling of old, dilapidated areas for their rejuvenation. The Plan contemplates a mechanism for the restructuring of the city based on mass transport. The Perspective Plans of physical infrastructure prepared by the concerned service agencies should help in better coordination and augmentation of the services.
19. The Master Plan envisages vision and policy guidelines for the perspective period upto 2021. It is proposed that the Plan be reviewed at five yearly intervals to keep pace with the fast changing requirements of the society.
20. The following critical areas have been the focal points of the Plan:
  - (a) **Land Policy:**  
The land policy <sup>1</sup>[based on the optimum utilisation of available resources, both, public and private in land assembly, development and housing to be as per Chapter 19.0.]
  - (b) **Public Participation and Plan Implementation:**
    - Decentralised local area planning by participatory approach;
    - Performance oriented planning and development, with focus on implementation and monitoring.

Figure A4\_20: key Highlights of MPD-2021

## Statutory Provision:

Local Area Plan for ward level development is one of the key highlight feature of MPD-2021 since 2007.(MPD-2021 was sanctioned in 2007)

Clause 3(13) of Chapter 17 in MPD-2021 enables the authority (DDA) to formulate policy guidelines for the sanctioning of local area plans, layout plans, comprehensive schemes, re-development schemes, urban renewal schemes and multistoried buildings in all land use categories.

Since then Municipal Corporation of Delhi (MCD) has prepared Local Area Plans for 33 wards.

*MPD-2021 modified upto 31/03/2017*

3(10) Rainwater harvesting shall form an integral part of the storm water drainage plan, at the time of sanction of any layout plan.

### SANCTION OF PLANS

3(11) Layout Plans / Site Plans and Building plans shall be approved by the Local Bodies and Authority in their areas of jurisdiction.

3(12) Authority / Local Body(s) shall be empowered after levying penalty to compound deviations from limits of coverage/ FAR to the extent of 5% of the permissible coverage and FAR, subject to maximum of 13.5 sqm. in building(s) / premises at the time of considering the completion / occupancy certificate. In Group Housing schemes and Public & semi-public facilities, 5% FAR beyond permissible FAR can be compounded by the authority / Local Body at the time of considering the completion/occupancy certificate.

3(13) Wherever required, the Technical Committee of the DDA shall formulate policy guidelines for the sanctioning of local area plans, layout plans, comprehensive schemes, re-development schemes, urban renewal schemes and multi-storeyed buildings in all land use categories. The Technical Committee shall be empowered to call for the plans from the development organisations / Local Bodies and would give directions / recommendations wherever necessary.

Figure A4\_21: Statutory Provision on MPD -2021 for sanctioning LAP



Figure A4\_22: Example of Ward Level Planning (LAP) studies conducted by DUAC

## Current Status:

Due to lack of statutory provisions, there is no clarity regarding the framework to sanction the LAPs prepared so far in Delhi. It has created a lack of clarity between MCD & DDA regarding who is responsible for sanctioning the LAPs. As a result, none of the LAPs are sanctioned yet.

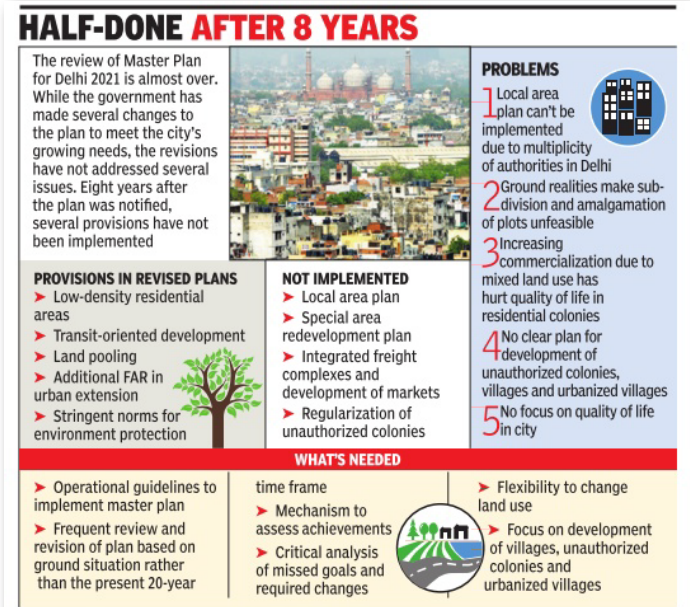


Figure A4\_23: E-News Paper Reporting on status of LAP in Delhi\_1

## MPD nearly ready, time to make it work

### *MPD needs tuning, operational guidelines to work*

NEW DELHI: Three years and more than 100 amendments later, the revised Master Plan for Delhi 2021 (MPD-2021) is nearly ready. While the Centre will soon notify provisions for transit-oriented development (TOD) and the environment, some amendments have already been implemented.

But is MPD-2021 a feasible plan? How much of it has been implemented? Does it really address the pressing concerns of the city and provide a realistic vision for sustainable development? Is it in sync with the ground realities? These are some of the questions on Delhi's mind.

Experts say many features of MPD-2021 have remained on paper for reasons ranging from the multiplicity of authorities in the city to poor enforcement and planning by the agencies concerned and the presence of many unauthorized colonies, slums, resettlement colonies and villages. Urban planners and experts TOI spoke to said the city needs operational guidelines to implement the MPD and these should be a part of the document.

The failure of civic and government agencies to prepare a local area plan (LAP) even after eight years is an example of the complications in the way of MPD-2021. The erstwhile Municipal Corporation of Delhi had made an LAP for some municipal wards but it was never notified as MCD said it didn't have the powers to notify it while DDA insisted only MCD could notify it. "Due to this technical discrepancy, there is no approved LAP which is critical for any area's development. Operational guidelines will help in overcoming such discrepancies and help in faster implementation of the plan," said Sanjukta Bhaduri, head of the department of urban planning in School of Planning and Architecture who prepared some of the LAPs.

Figure A4\_24: E-News Paper Reporting on status of LAP in Delhi\_2

## 4.5 Madhya Pradesh

### Background:

Development Mechanism for the State of Madhya Pradesh contains four layers of Planning.

- Regional Plans
- Development Plan
- Zonal Plan
- Town Development Scheme

The Madhya Pradesh Town & Country Planning Act, 1973 (M.P.T&C.P Act, 1973) provides statutory provisions to the local planning authority for practicing urban planning and development exercise.

Currently, there is no formal/direct provisions in the M.P.T&C.P Act, 1973 for preparing LAPs for brownfield redevelopment. But, Section 64 of M.P.T&C.P Act, 1973 enables the state government authorities to constitute Special Planning Authority (SPA) for notified areas. Special Planning Authority (SPA) shall regulate and prepare the development proposals for areas which are notified as 'special areas' under the regional plan. (refer Fig. XX)

Currently, there isn't any example/ case of such SPA formed under the provision of above-mentioned act in the state of Madhya Pradesh.



Figure A4\_25: Planning framework of Madhya Pradesh

### CHAPTER VIII

#### Special Areas

**64. Constitution of special areas.** - (1) If any area, town or township, is designated as a special area in the regional plan, or if the State Government is otherwise satisfied that it is expedient in the public interest that any area, town or township should be developed as a special area. It may, by notification, designate the area as a special area, which shall be known by such name as may be specified therein.

(2) Such notification shall define the limits of special area.

(3) The State Government may, by notification,-

(a) alter the limits of the special area so as to include therein or exclude therefrom such area as may be specified in the notification;

(b) declare that the special area shall cease to be so.

Figure A4\_26: Statutory Provisison of constitution of special areas in M.P.T.&C.P. ACT, 1973

However, based on the provision of National Smart City Mission, Indore Municipal Corporation (I.M.C.) & State Govt. of Madhya Pradesh has jointly formed the SPV (Special Purpose Vehicle), 'Indore Smart City' (Smart City Proposal (SCP): Indore). Indore Smart City is mainly dealing with retrofitting and redevelopment of area under the provision of Area Based Development (A.B.D.).

**ABD Area Delineation:**

Master Plan for ABD has identified the Rajwada Area, which is the CBD for the city of Indore. Area delineated for the proposed masterplan is 300 Ha of land parcel., The choice of Rajwada (CBD/Downtown Area) as ABD area was based on popular, practical and strategic considerations



Figure A4\_27: ABD Master Plan Report for Indore Smart City

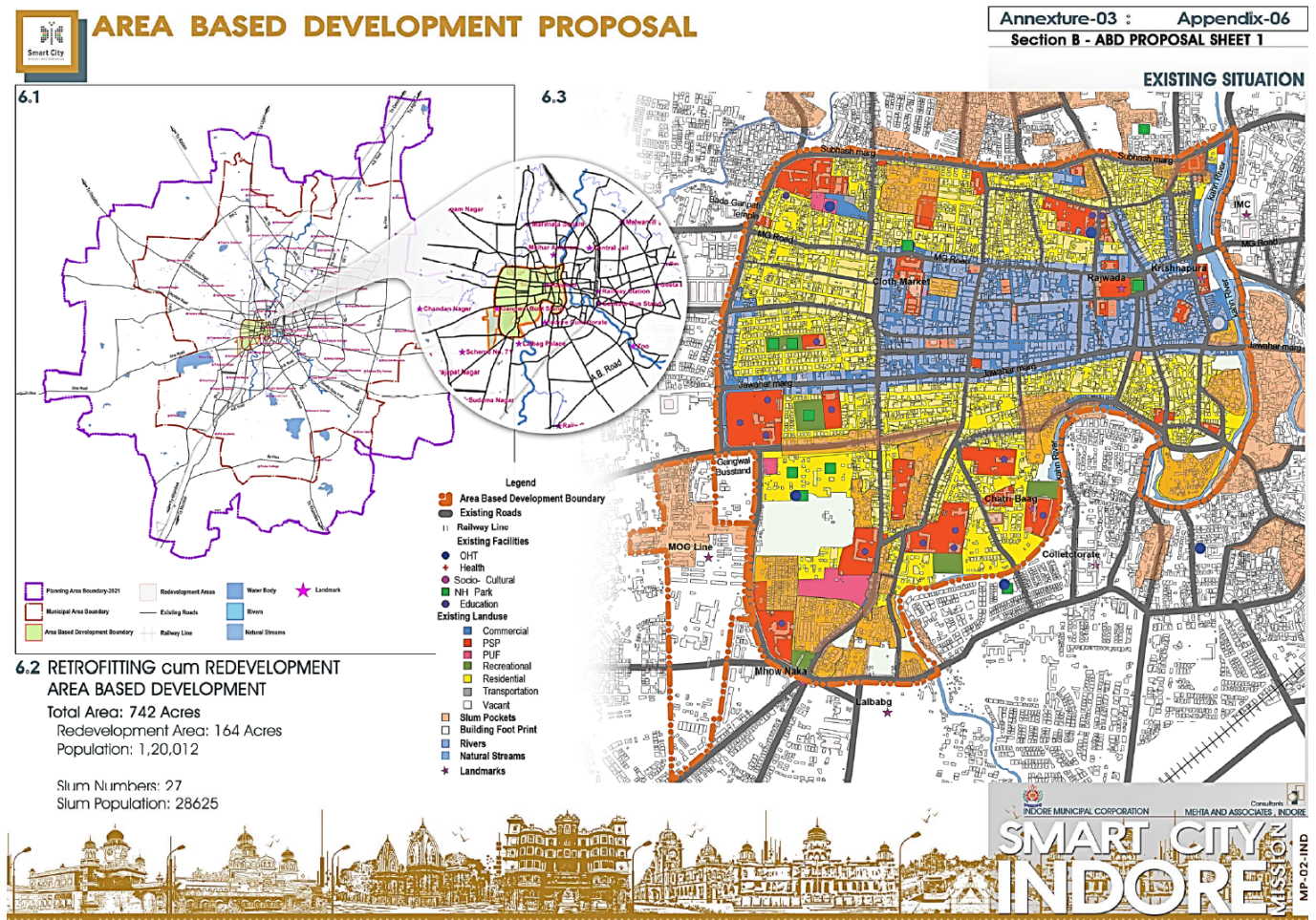


Figure A4\_28: RAJWADA - ABD Master Plan for Indore Smart City

## 4.6 Kerala

### Background:

Development Mechanism for the State of Kerala contents Three layers of Planning.

- Perspective Plan for Metropolitan Area
- Master Plan for City area (ULB)
- Detailed Town Development Scheme for Urban Expansions

The Kerala Town & Country Planning Act, 2016 (KTCP Act, 2016) provides statutory provisions to the local planning authority for practicing urban planning and development exercise.

Currently, there is no formal/direct provisions in the KTCP Act, 2016 for preparing LAPs for brownfield redevelopment. KTCP Act, 2016 used terminology LOCAL PLANNING AREA for the for the planning at Urban Local Body level plans (Master Plans).

LPA includes:

- Municipal Corporation,
- Municipal Council,
- Town Panchayat,
- Village Panchayat

Local Planning Area term identified the local governing body, not the Local Area Plans for redevelopment as described in previous cases.



Figure A4\_29: Planning framework of Kerala

(4) Immediately after the expiry of four years from the date of approval of the Execution Plan under sub-section (2), but not later than four months thereafter, the Metropolitan Planning Committee shall review such plan and prepare a fresh execution plan for five years commencing from the date of expiry of such plan in force after incorporating such modifications and amendments as may be considered necessary and get it sanctioned under this Act.

27. *Metropolitan Planning Committee to issue guidelines for preparation of five year and annual plans of Local Self Government Institutions.*—Metropolitan Planning Committee may, from time to time, issue guidelines for the preparation of five year and annual plans of Local Self Government Institutions, such that these plans are prepared in conformity with the Perspective Plan and Execution Plan of the Metropolitan Area and any other plans under this Act.

#### CHAPTER V

#### PLANS FOR LOCAL PLANNING AREAS

28. *Local Planning Area.*—From the date of commencement of this Act, the area under the jurisdiction of a Municipal Corporation, Municipal Council, Town Panchayat or Village Panchayat shall be deemed to be a Local Planning Area, for the purposes of this Act.

29. *Variations in the Local Planning Area.*—(1) In case the Government vary the area of jurisdiction of a Municipal Corporation, Municipal Council or Town Panchayat as provided under Section 4 of the Kerala Municipality Act, 1994 or of a Village Panchayat as provided under Section 4 of the Kerala Panchayat Raj Act, 1994, as the case may be, the Local Planning Area shall stand modified accordingly.

(2) The Government may, by notification in the Official Gazette, direct that all or any of the rules, regulations, bye-laws, orders and directions made or issued and powers conferred and in force in a Local Planning Area at the time, with such exceptions, adaptations and modifications as may be considered necessary by the Government, shall

Figure A4\_30: Statutory Definition of LPAs in KTCP Act, 2016

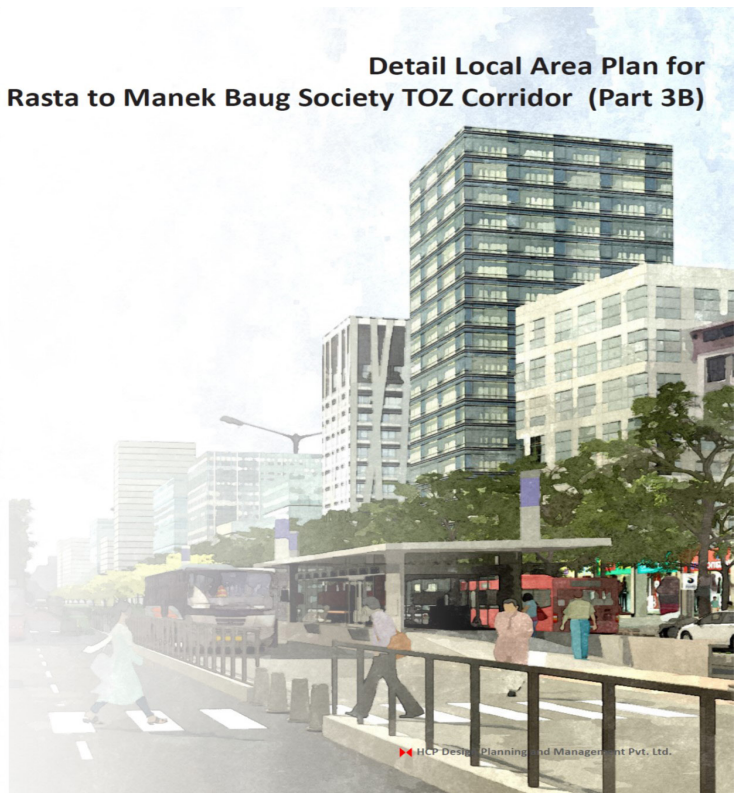
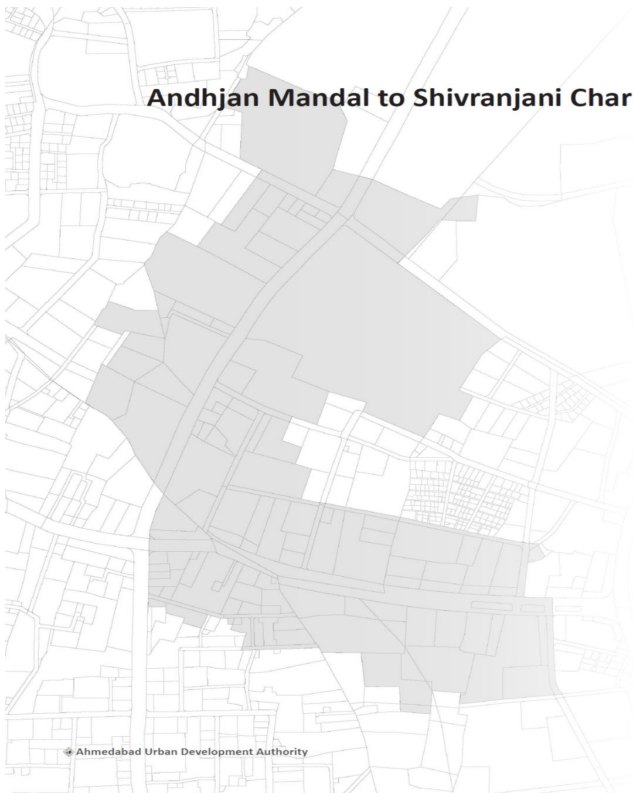
# A5

---

## Contents of Different types of LAP Reports

- 5.1 LAP for Transit Oriented Zones
- 5.2 LAP for Heritage Precincts

## 5.1 LAP for Transit Oriented Zones



## Contents

### 1. Introduction

### 2. Existing Situation Analysis

- a. Existing road network and transportation
  - Existing street network
  - Existing block size
  - 5 min walk distance from existing stops
  - Existing public transport infrastructure
  - Existing parking scenario and issues based on observations
  - Informal activities
  - Study of existing junctions and traffic count
  - Footpath, medians, pedestrian crossing availability
  - Existing Street Sections
  - Bicycle tracks
- b. Existing Land use and urban character
  - Land use
  - Built form
  - Built-up density as observed
  - Building/area condition based on observations
  - Land ownership
  - Parks and gardens
  - Public purpose plots and utilities

### 3. Proposal and Projects

- a. Walkability
  - Identification of new roads
- b. Accessibility
  - Public Transport Network
  - Pedestrian and cycle network
- c. Traffic Management Plan
  - Street section
  - Junction Design Proposals
  - Circulation Pattern
  - Other Traffic Management Proposals

### d. Parking Management Plan

- Parking concept plan and parking guidelines
- On Street Parking Proposal
- Off Street Parking Proposal
- Conceptual designing of open spaces, gardens, station area plaza development

### e. Physical infrastructure

- Density concept and calculation
- Infrastructure demand

### 4. Cost Estimate & Implementation Strategies

- a. Block level cost estimate for various capital projects identified in LAP
- b. Implementation strategies and institutional framework for project execution
- c. Resource mobilization

Annexure : LAP Maps - Published LAP map at 1:2000 scale  
: General Development Control Regulation



## 5.2 LAP for Heritage Precinct

In 2014, an amendment in the GTPUD Act of 1976 brought the provision of preparing Local Area Plans (LAP) for the renewal and regeneration of urban areas in the state of Gujarat. While this provision is intended to be applied widely for improving any type of existing urban areas, currently, this mechanism is used only to prepare Local Area Plans for improving urban areas falling under TOZ and CBD through incentivized redevelopment. And till now, there is no example of this statutory mechanism being used for preparing Local Area Plans for the heritage areas of core walled city. As this mechanism is still new, it is not yet applied for planning, conservation and enhancement of a heritage precincts. This document is an attempt to prepare an LAP in the heritage precinct of Core Walled City of Ahmedabad with Dhal Ni Pol as the case, and is supposed to act like a manual to help the authorities in preparation of other LAP's in the Walled City of Ahmedabad.

Much before Ahmedabad was inscribed in the World Heritage City list, Mahila Housing SEWA Trust has been working to 'revitalize the heritage precinct of Dhal Ni Pol' with a comprehensive approach of improving the public and private realm through community participation. Over the years, with the help of a faculty and students from CEPT University, as well as volunteers from MHT, the research for the project was conducted and incremented to be part of a Local Area Plan.

The contents of this LAP are:

- LAP Report
- LAP Maps (1:500)
- Regulation and Guidelines
- Owners' Contribution Form

Following pages indicates the content of Heritage LAP Report.

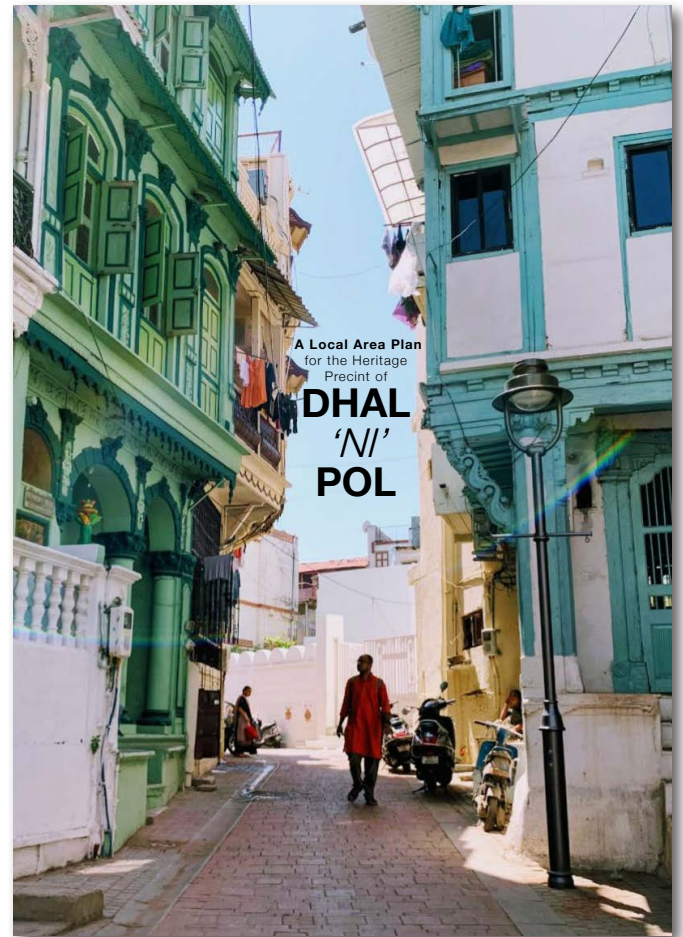


Figure A5\_1: Dhal ni Pol - A LAP for Heritage Precincts

Source: Adopted from Student's Work, M.U.P., CEPT University

# Contents

## PART -A Background Studies

<b>1</b>	<b>Introduction &amp; Background</b>	<b>14-29</b>
1.1	Ahmedabad: The UNESCO World Heritage City	14
1.2	History & Evolution	15
1.2.1	Political	16
1.2.2	Urban Morphology	18
1.2.3	Pols & Architectural Style	19
1.3	Planning efforts	21
1.3.1	Listing of Heritage Structures	22
1.3.2	Comprehensive General Development Control Regulations-2017	25
<b>2</b>	<b>Context and Delineation of boundary</b>	<b>32-37</b>
2.1	About the Precinct	32
2.2	Delineation of Boundary	34
<b>3</b>	<b>Existing Situation Analysis</b>	<b>40-85</b>
3.1	Need For Analysis	40
3.2	Tangible Aspects	41
3.2.1	Private Realm	41
3.2.1a	Built vs Vacant Plots	42
3.2.1b	Ownership	42
3.2.1c	Size of Plots	44
3.2.1d	Built Use	44
3.2.1e	Built Height	46
3.2.1f	FSI Consumption	46
3.2.1g	Built Type	48
3.2.1h	Built Character & Grading	48
3.2.1i	Built Condition	50
3.2.1j	Built Style	50
3.2.1k	Contribution to Heritage Character	52
3.2.1l	Vulnerability to Lose Heritage Character	53
3.2.1m	Degree of Intervention & Expertise for Conservation	54
3.2.1n	Jardin Rate	55
3.2.1o	Conclusion	56
3.2.2	Public Realm	58
3.2.2a	Public Realm in Dhal Ni Pol	59
3.2.2b	Landmarks and their Significance	61
3.2.2c	Active Spaces	63
3.2.2d	Street Network & Parking	64
3.2.2e	Infrastructure (Water, Sewage, Solid Waste, Cables, Street Lights)	67
3.2.2f	Facade & Visual Elements	72
3.2.2g	Conclusion	74
3.3	Intangible Aspects	75
3.3.1	Social-economic Condition	75
3.3.2	Cultural & Tradition Mapping	78
3.4	Summary	84

## PART -B Proposals

<b>4</b>	<b>Vision, Approach &amp; Concept</b>	<b>88-97</b>
4.1	Purpose and Vision for LAP	75
4.1.1	Purpose	88
4.1.2	Vision	89
4.2	Approach	90
4.2.1	Historic Urban Landscape Approach	90
4.2.2	Approach for Dhal Ni Pol	90
4.3	Comprehensive Concept Plan	94
4.3.1	Public Realm Improvement	94
4.3.2	Private Realm Improvement	96
<b>5</b>	<b>Public Realm Improvement</b>	<b>100-153</b>
5.1	Public Realm	100
5.1.1	What is Public Realm?	100
5.1.2	Components of Public Realm	101
5.1.3	How these components contribute to the precinct character?	102
5.2	Improving Public Realm	105
5.2.1	Need for Improving Public Realm	105
5.2.2	How Public Realm Can be Improved?	105
5.3	Improving Public Realm Through Design & Planning	106
5.3.1	Design and Planning of Dhal Ni Pol	107
5.3.2	Execution of Work Onsite	126
5.4	Improvement Through Guidelines, Incentives and Management	139
5.4.1	Guidelines for Facade Improvement and Conservation	139
5.4.2	Incentives for Improvement	147
5.4.3	Parking & Vending Management	148
5.5	Cost Estimate of Public Realm improvement	149
5.6	Recommendation for Implementing Improvements in Public Realm	151
5.6.1	Recommendation for Design and planning	151
5.6.2	Recommendation for Institutional Framework	152
5.6.3	Recommendation for Appointment of Consultants and Contractors	153

<b>6</b>	<b>Private Realm Improvement</b>	<b>156-211</b>
6.1	Private Realm	156
6.1.1	What is Private Realm?	156
6.1.2	Heritage Precinct & Character	156
6.1.3	Components of Private Realm in Heritage Precincts	157
6.1.4	Role of Local Authority in Private Realm Improvement of Heritage Precincts	158
6.2	Issues & Observations	159
6.2.1	Issues in Regulations & Incentives	160
6.2.1a	General Issues	160
6.2.1b	Issue Related to Built Use Regulations	161
6.2.1c	Issue Related to Built Form Regulations	162
6.2.1d	Issue Related to Architectural Control & Aesthetics	164
6.2.1e	Issue Related to Incentives	165
6.2.2	Issues in Institutional Framework	166
6.2.3	Issues in Involvement of Professionals	168
6.2.4	Issues in Maintenance of Heritage Structures	168
6.3	Recommendations for Improvement of Private Realm	169
6.3.1	Improving Regulations & Incentive	169
6.3.1a	Key Considerations for Improved Regulations & Incentives	169
6.3.1b	Recommendations related to Built Use	171
6.3.1c	Recommendations related to Built Form	172
6.3.1d	Recommendations related to Architectural Control & Aesthetics	173
6.3.1e	Recommendations related to TDR & Incentives	174
6.3.1f	Recommendations related to TDR Market	175
6.3.1g	Structure for Improved Regulations & Incentives	178
6.3.2	Improving Institutional Framework	180
6.3.3	Encourage Involvement of Professionals	182
6.3.4	Encourage Maintenance of Heritage Structures	183
6.4	Regulations for Dhal Ni Pol Precinct	185
6.4.1	Definitions	185
6.4.2	Regulations, Guidelines & Incentives	186
6.4.3	Annexes	194
6.5	LAP Maps for Dhal Ni Pol Precinct	201
6.6	L-Form for Dhal Ni Pol Precinct	208
6.7	Costing & Revenue	210
6.7.1	Costing	210
6.7.2	Revenue	211
<b>7</b>	<b>Implementation Framework</b>	<b>214-223</b>
7.1	Institutional Framework, Roles & Responsibilities	214
7.1.1	3-Tiered Governance	214
7.2	LAP Roadmap	217
7.3	Funding	222

## PART-C Annexures & References

<b>8</b>	<b>Annexes</b>	<b>226-387</b>
8.1	Case Studies	226
8.1.1	Urban Renewal Through Projects in Public & Private Realm	226
8.1.1a	Nizamuddin Urban Renewal Initiative	226
8.1.1b	Golden Temple Street Revitalisation, Amritsar	234
8.1.2	Urban Renewal Through Conservation Guideline & Regulations	238
8.1.2a	Urban Renewal in Central Singapore	238
8.1.2b	Heritage Management Plan for The Walled City of Jaipur	244
8.1.3	Incentive Based Urban Renewal and Conservation	248
8.1.3a	Mumbai TDR Policy	248
8.1.3b	Seattle Historic Preservation Programme	251
8.1.3c	Provisions for Heritage Conservation in Hyderabad	255
8.1.4	Takeaways for Ahmedabad Walled City (Dhal Ni Pol)	258
8.2	Detailed Analysis	260
8.2.1	Heritage TDR-Market in Ahmedabad	260
8.2.1a	Supply Side	260
8.2.1b	Demand Side	271
8.3	Legal Documents	260
8.3.1	GTPUDA Act 1976, Amendment 2017	276
8.3.2	List of Heritage Buildings Within the Historic City of Ahmedabad	288
8.3.3	Recommendations to be Considered For Modification In the DP	311
8.3.4	Excerpts from AUDA GDR 2002	314
8.3.5	Excerpts from AUDA GDR 2021	324
8.3.6	Excerpts from CGDCR-2017; Gazette Notification Oct 12, 2017	345
8.3.7	Excerpts from CGDCR-2017; Gazette Notification Oct 3, 2019	363
8.3.8	Schedule 19-CGDCR-2017; Gazette Notification of Sept 20, 2007	379
8.3.9	The Walled City Revitalization Plan, AMC-EPC-TSS	379
<b>9</b>	<b>Bibliography</b>	<b>390-393</b>

# A6

---

## Recommended Guidelines for Preparation and Implementation of LAP through Statutory Provisions

(to be incorporated with necessary modifications as deemed appropriate by the government under GTPUD Act 1976 and GTPUD Rules 1979 for the state of Gujarat)

(Reference for other States and UT's for statutorily enabling LAP mechanism)

- 6.1 Background
- 6.2 Recommended Guidelines for Enabling LAP Mechanism through Statutory Provisions

## 6.1 Background

The Local Area Plan (Local Area Plan) is a relatively newer statutory mechanism adopted by the state of Gujarat in 2014 and further improved in 2017 through amendments in the Gujarat Town Planning and Urban Development Act (GTPUDA) 1976. Currently **Section 76A** provides “**Special provisions for Local Area Plan**” which details out the provisions for undertaking the Local Area Plan mechanism in the state of Gujarat. Additionally, the State Government in its intent to further improve and strengthen this mechanism is in the process of drafting a set of Rules for Local Area Plan under the Gujarat Town Planning and Urban Development Rules, 1979. As part of its statutory functions, the Gujarat Real Estate Regulatory Authority (Guj-RERA), for the purpose of facilitating growth, regulation and promotion of healthy, transparent, effective and competitive Real Estate sector had undertaken the review of all current urban planning regime in the state. This review of such provisions enables Guj-RERA to provide a set of recommendations to assist the Urban Development & Urban Housing Development Department (UD&UHD) in their efforts for improving these mechanisms by strengthening statutory provisions in the Act and/or rules, procedures and institutional framework.

While the “Manual for preparation of Local Area Plan” provides detailed guidance for preparing the Local Area Plan under the current provisions of GTPUD Act 1976, this section recommends “guidelines for plan preparation and implementation of LAP as per the Act”. **If deemed appropriate by the state government, these guidelines can be incorporated as statutory provisions with appropriate modifications as part of the Act and/or rules under the Gujarat Town planning and urban development Rules 1979.** Further, these recommended guidelines also provide a good reference point for other States and UT’s in India for efficiently enabling the LAP mechanism as part of their statutory provisions.

## 6.2 Recommended Guidelines for Enabling LAP Mechanism through Statutory Provisions

### 1. Delineation of boundaries for Local Area Plan under section 76A(1)

- 1.) For purpose of delineating the boundaries for Local Area Plan, the authority shall refer to the final development plan proposals, and consider the proposed delineation of boundaries for Local Area Plan, if provided, and if found appropriate.

### 2. Publication of “Boundaries of Area for which the Local Area Plan is to be made” under section 76 A(2)

- 1.) The declaration of boundaries of area for which the Local Area Plan is to be made under section 76 (A)( 2) shall be published in the Official Gazette and shall also be published by means of an advertisement in one or more Gujarati newspapers circulating within the jurisdiction of the appropriate authority. The appropriate authority shall cause copies of such advertisement to be pasted in the prominent places in or near the area included in the Local Area Plan and at the head office of the appropriate authority.
- 2.) Every advertisement published under rule ( 1) shall contain the resolution of the appropriate authority in respect of the declaration under section 76A( 2) and shall announce that a copy of the plan of the area proposed to be included in the Local Area Plan and the surrounding lands is kept open for inspection of the public at the head office of the appropriate authority during office hours.

### 3. Preparation of Base Map and Land Records

- 1.) Subsequent to publication of boundaries of Area for which the LAP is to be made, the authority shall prepare a draft base map showing all plots and all buildings with number of floors within the area, along with their land records at a scale not smaller than one cm to twenty meters.
- 2.) The authority shall invite the land owners and the beneficiaries to inspect and verify the draft base map along with the land records prepared under above section 2( 1) through a public notice in the local newspapers, by pasting copies of such notice in the head office of the appropriate authority and other prominent places in the area, and by individual notice to every owner whose

address is known to the authority

- 3.) The notice shall communicate that a copy of the draft base map and the land records is open for public inspection and verification for 30 days at the head office of the appropriate authority during office hours. The appropriate authority may also make a copy of the draft base map and the land records available on internet for public view during the same time period.
- 4.) The authority may take into consideration all suggestions made and objections raised on the draft base map and the land records made available for public inspection, and prepare a final base map at a scale not smaller than one cm to twenty five meters showing all plots and all buildings with number of floors, along with final land records for subsequent preparation of Local Area Plan.

#### **4. Manner of preparation of draft Local Area Plan under section 76A(3)**

- 1.) The authority or a Local Area Plan coordinator appointed by the authority shall prepare the draft Local Area Plan in the manner provided in section 76A( 3) after carrying out the survey of the area within the jurisdiction of the appropriate authority.
- 2.) The draft Local area plan shall comprise of Local Area Plan Maps, Statements, Regulations and Local Area Plan Report. These components shall be prepared in the following manner.
  - a.) Local Area Plan **Maps** shall include:
    - i.) An **index map** on a scale not smaller than one cm. to seventy-five mts showing:
      - > The area included in the Local Area Plan and the surroundings within reasonable limit on all sides of such area; and
      - > all existing roads and means of communications of every kind.
    - ii.) An **Existing Plots Map** on a scale not smaller than one cm to twenty-five meters showing all existing plots as per the final base map, including final plots as per the town planning scheme, survey plots and/or revenue plots with identification numbers, all existing buildings and levels of existing roads along with other areas.
    - iii.) A **Revised Plots Map** on a scale not

- smaller than one cm. to twenty five Mts., showing
- > The boundaries of the plots as per the Local Area Plan proposals as they will appear after the Local Area Plan is executed, with their numbers and illustrating as far as possible by means of colors/shade, letters and explanatory notes or in some other convenient manner all such provisions of the Local Area Plan as may properly be illustrated in the plan.
  - > The revised street network clearly identifying new and enhanced streets and roads of different types classified in different categories such as new streets to be developed, streets to be widened, streets to be prioritized for pedestrian and non-motorized modes etc.
  - > The areas allotted for public purposes such as plazas, parks, vehicular parking and other amenities etc.
- iv.) A Map illustrating **Urban Design and Built form Regulations** such as built-to-line, arcade, step-backs, permissible building footprints, permissible building heights, etc. on a scale not smaller than one Cm. to twenty five Mts.
- b.) Local Area Plan **statements** shall include:
- i.) A **statement recording Owners contribution** in terms of land area, which shall include all plots included in the Existing plots Map, their ownerships (including societies and companies etc), plot area, permissible built-up as per prevailing regulations, consumed Floor space, built use, area of the plot affected under Local Area Plan proposals (if any) , amount of compensation to be paid (if any) etc. (in Form xx)
  - ii.) A **statement recording Cost Estimates** with the estimates of all works contemplated in the Local Area Plan including costs incurred in undertaking the existing situation analysis, hiring consultants for surveying, cost of infrastructure installation/ upgradation, cost of publication of Local Area Plan under the provision of the Act, Cost of conducting meeting/s of persons

affected and other such consultations, compensation for individual plot owners (if any), who are affected by the proposals of Local Area Plan. (in Form yy)

- iii.) A statement explaining the **estimated financial expenditure** of the Local Area Plan.

- c.) Local Area Plan Regulations shall include a set of Regulations including Form-based Regulations for the control of development within the Local Area Plan area.
- d.) Local Area Plan Report shall document all key decisions of the Local Area Plan preparation process. The structure of draft report may include the following:
  - i.) Purpose of LAP
  - ii.) Site and context
  - iii.) Assessment of Existing situation including thematic layers on maps
  - iv.) Vision and concept
  - v.) Principles and approach
  - vi.) Schematic Layout including various layers such as:
    - > Urban character and zoning
    - > Street network and guidelines for street design
    - > Network of Parks, green space, open spaces, water bodies and other natural features
    - > Public purpose plots indicating proposed amenities and social infrastructural plots
    - > Parking Management plan
    - > Informal vending areas plan
    - > Physical infrastructure plan including water network, sewerage network, storm water network etc.
    - > Affordable Housing and EWS
  - vii.) Regulations and Guidelines for Local Area Plan
  - viii.) Cost Estimates and Revenue Generation
  - ix.) Phasing and Implementation strategies

## **5. Manner and method of compensation payable to persons affected by draft LAP under section 76A(3)**

- 1.) The compensation (& incentive) payable/ available under section 76A shall be as much as the Floor Area Permissible on the land area



contributed for public purpose as per the Local Area Plan. This compensation shall be payable in form of FSI/Floor Area which can be consumed on the remaining plot or on another plot as per Transferable Development Rights (TDR) regulations of the Local Area Plan.

- 2.) The cost of improving the existing infrastructure and/or developing new infrastructure may be recovered through chargeable FSI, Development charges, any other such mechanism as deemed appropriate by the authority considering the feasibility/affordability of such payments by the plot owners
- 3.) The compensation payable shall be limited to the present value of the standing structure without the value of the materials.
- 4.) The compensation payable under this rule shall be paid in the same manner as any other compensation under the Act.

## 6. Manner of calculating compensation and Transferable Development rights (TDR)

- 1.) The Transferable Development rights (TDR) regulations should be formulated based on the following considerations:
  - a.) The TDR regulations shall identify the amount of TDR generated and or amount of TDR receivable on a plot within identified area or zone.
  - b.) The value of TDR generated from a plot shall be determined by multiplying the TDR with the prevailing jantri rates applicable on the Final Plot. **Value of TDR = TDR x Jantri rate**
  - c.) TDR can be received in areas identified by the authority as per DP and /or Local Area Plan.
  - d.) TDR can be consumed over and above the permissible FSI but respecting all other regulations.
  - e.) The Authority shall enable Transaction of TDR on the principle of value to value transfer, i.e. the exact value of TDR in the generating plot to be transferred to the receiving plot.
  - f.) For enabling smooth transaction of TDR, the authority may develop various procedures and tools including but not limited to the following:
    - i.) The Authority should provide TDR

certificate to the plot owner upon sanctioning of the Local Area Plan.

- ii.) The Authority shall maintain all records of TRD transactions on digital platforms.
- iii.) The authority may charge a Transaction fee for providing its services and platforms for smooth transaction.

## **7. Meeting of persons affected by Local Area Plan and framing of tentative proposals under section 76A(4)(a).**

- 1.) For the purpose of making the draft Local Area Plan under section 76A(4)(a) the appropriate authority shall call a meeting or meetings of the owners of the lands included in a Local Area Plan by a public notice as well as by individual notice to every owner/affected persons whose address is known to the appropriate authority and explain in such meeting the tentative proposals of the draft Local Area Plan for eliciting public opinion and suggestions on the said proposals. The appropriate authority may take into consideration all such suggestions made and objections raised on the proposals for making the draft Local Area Plan under section 76A(4)(a).

## **8. Publication of draft Local Area Plan under section 76A (4)(b).**

- 1.) The Local Area Plan under section 76A(4)(b) shall be published by means of an advertisement in the Official Gazette and shall also be published in one or more Gujarati newspapers circulating within the area of the appropriate authority. The appropriate authority shall also cause copies of such advertisement to be pasted at the head office of the appropriate authority and at other prominent places in or near the area included in the draft Local Area Plan. The advertisement shall state that a copy of the Local Area Plan is open for public inspection at the head office of the appropriate authority during office hours.
- 2.) Every advertisement published under rule (1) shall announce that if within thirty days from the date of publication of the draft Local Area Plan in the Official Gazette any person affected by such Local Area Plan communicate in writing to the appropriate authority any suggestion and objection relating to such Local Area Plan, the appropriate authority shall consider such objections before submitting the draft Local Area Plan to State Government under section

76A(5).

**9. Manner of Submission of draft Local Area Plan to the state government under section 76A(5)**

- 1.) After the Local Area Plan is prepared the authority or the LAP coordinator appointed by the authority shall submit the same to the State Government through the Chief Town Planner along with the particulars referred to in section 13(2) (a to e) shall be applicable to Local Area Plan.

**10. Period within which the draft Local Area Plan and the regulations shall be sanctioned under sub-clause (I) of clause section 76A(6)**

- 1.) On receipt of Local Area Plan from the authority the state government may by a notification sanction, return or refuse to accord sanction within three months/ six months.
- 2.) In case where the state government returns the plan to the authority with directions for any modification, the authority shall submit the modified Local Area Plan to the state government within six months / twelve months from the date of receiving the Draft Local Area Plan from the state government under section 76(6)(b).

**11. The documents and plans to be accompanied with the intimation for carrying out any development work upon sanction of Local Area Plan shall be as follows :-**

- 1.) An official letter of the Government department addressed to the appropriate authority or as the case may be to the authorized officer seeking the permission for carrying out the development work or any operational construction with full particulars thereof.
- 2.) Building plan for the proposed development work to a scale of not less than 1/100.
- 3.) Report and Plans showing complete details of the operational construction as defined under section 76A(3) such as detailed alignments, layouts, locations, Future Street design Plan, traffic movement plan, estimated cost for infrastructure, Reports and such other matters with measurements.
- 4.) Any other proposals of the draft Local Area Plan, affecting the land Provided that in the case of

works proposed to be undertaken by the local military authority of the Defence Ministry, the provisions of clauses ( 2) and ( 3) shall not apply and such authority shall be required to submit the layout plan of such works.

## **12. Appropriate authority concerned to forward copy of final Local Area Plan**

- 1.) When a Local Area Plan is sanctioned by the State Government section 76A①, the appropriate authority concerned shall without delay forward a copy of the Local Area Plan to the Superintendent of Land Records of the Region for the purpose of correcting the survey records.

## **13. Procedure for eviction under Section 76A(8).**

- 1.) For eviction under section 76A( 8), the appropriate authority shall follow the following procedure viz. -
  - a.) The appropriate authority shall in the first instance serve a notice upon a person to be evicted requiring him, within such reasonable time as may be specified in the notice, to vacate the land.
  - b.) If the person to be evicted fails to comply with the requirement of the notice, the appropriate authority shall depute any Officer or Servant to remove him.
  - c.) If the person to be evicted resists or obstructs the Officer or Servant deputed under clause (b) or if he re-occupies the land after eviction, the appropriate authority shall prosecute him under section 188 of the Indian Penal Code.

## **14. Notice before Enforcement of Local Area Plan under section 76A (8).**

- 1.) Before removing, pulling down or altering any building or other work, under sub-section ① of section 76A( 8), the appropriate authority shall serve a notice on the owner or occupier of the building or work, as the case may be, calling upon him to remove, pull down or alter such building or work or execute such work within such reasonable time as may be specified in the notice intimating him the intention of the appropriate authority to do so on failure to

comply with the requirement of the notice. Such notice shall as far as may be, be in Form \_\_\_.

**15. Documents etc. to be accessible under section 76A(7).**

- 1.) Documents, plans and maps relating to a finally sanctioned Local Area Plan shall be kept open for public inspection at the head office of the appropriate authority at any time during office hours of the appropriate authority for a period of six months from the date of the Official Gazette in which the sanction was published.
- 2.) All Local Area Plans finally sanctioned by Government shall be lodged with the Town Planning and Valuation Department on the expiry of the period mentioned in sub-rule ①.
- 3.) The head of Town Planning and Valuation Department may, on an application of an owner of any plot included in the scheme so sanctioned, issue a certificate in Form \_\_ specifying the area and boundaries of a Final plot, the nature of the tenure of land of the owner's title to such a plot and the name of the person to whom the plot has been allotted under the Local Area Plan.

