

BUREAU OF INDIAN STANDARDS

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**मसौदा भारतीय मानक
नगरपालिका प्रशासन –
भाग 3: भवन नियोजन स्वीकृति –
अनुभाग 6: वर्गिकी**

***Draft Indian Standard
Municipal Governance –
Part 3: Building Plan Approval –
Section 6: Taxonomy***

ICS 33.020, 35.020

**LITD 28 Smart Infrastructure Sectional
Committee**

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FOREWORD

This Draft Indian Standard (Part 3/Sec 6) will be adopted by the Bureau of Indian Standards, after the draft finalized by the Smart Infrastructure Sectional Committee LITD 28, will be approved by the Electronics and Information Technology Division Council.

In the last two decades, India has recognized the significant impact of technology in facilitating progress and development, particularly in its urban areas. As a result, India is poised to lead the digital revolution with a focus on its cities. By embracing emerging technologies in urban governance, India aims to transform its journey to economic power. To achieve this, the Ministry of Housing and Urban Affairs (MoHUA) launched the National Urban Digital Mission (NUDM) in February 2021. The mission seeks to establish a shared digital infrastructure that strengthens the capacity of the urban ecosystem to address complex problems efficiently and at scale. This initiative aims to enhance citizens' ease of living through inclusive, accessible, efficient, and citizen-centric governance in India's 4800+ towns and cities. To drive this effort, the National Institute of Urban Affairs has established the Centre for Digital Governance (CDG) to bring together the MoHUA's digital initiatives and to help drive urban standardisation effort. The NUDM builds on the guiding principles outlined in MoHUA's 2019 National Urban Innovation Stack (NUIS) - Strategy and Approach paper, which was developed to accelerate urban transformation.

The CDG has been working on a set of standards on Taxonomy, Data Models and APIs, and process lists for few domains such as Building Plan Approval, Municipal Finance and Accounting, Birth and Death Certificates, Property Tax, Trade Licenses etc. to enable integrated e-governance and digital delivery of municipal services. This standard is sixth in the series.

The taxonomy for building plan approval was initially created by the Centre for Digital Governance (CDG) at National Institute of Urban Affairs (NIUA).

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0 INTRODUCTION

The terminology and vocabulary used for municipal governance differ among ULBs across India due to the federal structure of governance, state-specific laws, and varying eGovernance system implementations. Non-standardized interfaces and storage also result in challenges related to data interpretation and interoperability. As a consequence, measuring municipal performance can lead to significant inconsistencies not only from city to city but also from state to state. Therefore, without clear definitions, vocabulary, specifications, and benchmarks for municipal governance, it is challenging to enable 'Data-Driven Governance.'

The municipal governance standards are being designed to include minimum base data elements common across municipal services in ULBs/development authorities or parastatals to ensure interoperability, harmonization, and data-driven governance. ULBs with more complex processes can adopt and expand on these initiatives. The Knowledge Standards will help,

- a) identifying and categorizing important data elements for a domain
- b) resolving differences in terminology for Urban Governance
- c) to analyse current city domain models, processes, reports & KPIs; thus, retrofitting existing data models with missing data

The Building Plan Approval Taxonomy, as defined in this standard, includes common building plan approval entities, channels, processes, stakeholders, reports, and KPIs and their definitions. All definitions in this standard are notional definitions intended for conceptual purposes only. The actual definition of entities for building plan approval purposes should be considered as per state legislations, rules, or acts. The taxonomy structure outlined in this document can be scaled both vertically and horizontally to accommodate the unique complexities of ULBs/development authorities or parastatals and any changes in people, processes, and technology that may occur over time.

The Building Plan Approval Taxonomy will be used to develop Building Plan Approval Data Models and API Specifications, as well as for creating metadata specifications. Annex 1 provides sample parameters and specifications to aid comprehension. These standards are designed to ensure semantic and syntactic interoperability among all eGovernance systems operating in India.

The intended audience for this standard includes government organisations, industries, academics, architects, customers, users, tool developers, regulators, auditors, and standards development organisations.

This document is also interrelated with other Indian standards for eGovernance, such as SP7:2016, IS 18000, IS 18006 (Part 1), and IS 18006 (Part 3/Sec 1):2021.

Building Plan Approval Taxonomy is developed as an open standard under National Urban Digital Mission by National Institute of Urban Affairs. No part(s) of the document can be sublicensed further by any other organisation. Any attempted sublicense, whether voluntarily or otherwise, shall be null and void, and will attract penal actions.

0.1 Governing Principles in the Design of Knowledge Standard

In designing this taxonomy, the following principles have been applied to ensure its alignment with the needs of diverse stakeholders

0.1.1 Minimalist

The standards are designed to have minimum base elements common across ULBs/development authorities or parastatals to ensure interoperability, harmonization and data driven governance. These

can then be adopted and built upon by some ULBs/development authorities or parastatals with higher process complexities.

0.1.2 Evolvable

The standard is designed to evolve over a period of time thereby adapting to changing needs and emerging technologies thus making the system comprehensive progressively.

0.1.3 Modular

The classifications and categorizations in the knowledge standard are designed modularly, yet they function together as a whole. They are independent and self-contained and may be combined and configured with similar units to suit separate contexts. E.g., The Property “Use” element and its sub classifications can be easily reapplied in the context of any Building Plan Approval System or Trade License System.

0.1.4 Extendible

The standard is designed to be exhaustive and the elements of Urban Governance are positioned in a hierarchy which can accommodate both horizontal and vertical additions. This leaves room for wider adoption and innovation to suit contexts of any ecosystem. The end goal is to build a knowledge practice that supports Open Standards with the Data Element taxonomy as a base.

0.1.5 Open

The standard is designed to be ‘open’ to enable wider ecosystem participation and use. The standard is intended to be used by State Governments, Urban Local Bodies, industry and technology providers, academia and civil society organisations who are either working in the domain or are providing services to the ULBs/development authorities or parastatals in any manner.

0.1.6 Accessible & Inclusive

The standard is designed to be inclusive and accessible in nature for all types of stakeholders. The standard will enable the technology to reach every section of society. For e.g.: Interactive Voice Responses and non-digital channels as included in Clause 5.2 will enable the marginalized and differently abled citizens to use the service in a more efficient manner. Also, stakeholders such as intermediates can also help in building capacities or creating awareness.

0.2 Sample Use Cases

Samples of Building Plan Approval Taxonomy use cases are mentioned below for reference.

0.2.1 Direct Application

By storing, generating and using these important data elements (entities, stakeholders, processes & reports) in day-to-day operations.

- a) Designated ULB officials can use the taxonomy to add channels and ULB types in the BPA system, facilitating assessment and processing of application/assessment requests.
- b) During submission of application forms for the Occupancy cum Completion Certificate, capturing the Property ID can eliminate redundant or bulky forms and facilitate data reuse and harmonization across departments.
- c) Monitoring BPA applications by status, SLB adherence, and channels of transactions empowers ULBs/development authorities or parastatals officials to take timely corrective and preventive measures.
- d) Timely updating and monitoring of DCB registers can enable better planning and revenue management for ULBs/development authorities or parastatals.

0.2.2 Indirect Application

By using these data elements in evidence-based governance and long-term planning

- a) Analysing BPA applications by their purpose can help ULBs/development authorities or parastatals regulate land use, plan revenue management models, and schedule inspections more efficiently with respect to required regulations.

0.2.3 Information Consistency

By using these data elements while using and sharing data (via Metadata tags in reports and dashboard)

- a) Consistent use of these data elements, processes, KPIs, and their definitions from the service taxonomy helps in implementing information consistency across ULBs/development authorities or parastatals. To ensure information consistency, ULBs/development authorities or parastatals should use metadata tags from the data elements defined in this knowledge standard while using and sharing data via reports and dashboards on new or existing platforms for delivering BPA services.

1 SCOPE

This Indian standard provides a unified view of the Building Plan Approval data and processes in urban local bodies and introduces common and widely accepted terminologies and semantics that can be used across multiple systems.

2 REFERENCE

The standards given below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards.

SP 7:2016 National building code of India (Third Revision)

IS 18006 (Part 1) Municipal Governance - Reference Architecture

IS 18006 (Part 3/Sec 1) : 2021 Municipal Governance - Part 3 Property Tax - Section 1 Taxonomy

3 TERMINOLOGY AND ABBREVIATIONS

3.1 Terminology

For the purpose of this standard, the definitions given in SP7: 2016, IS 18006 and IS 18006 (Part 3/Sec 1): 2021 shall apply, in addition to the following:

i. Aadhaar

Aadhaar is a verifiable 12-digit identification number issued by the Unique Identification Authority of India (UIDAI) to the resident of India.

ii. Application Programming Interface (API)

The term Application Programming Interface (API) means any mechanism that allows a system or service to access data or functionality provided by another system or service. The API is generally used to interact (like query, list, search, sometimes submit & update) directly with the specific information on a system, to trigger some action on other systems, or to perform some other action on other systems.

iii. Data Elements

The basic principle of data modelling is the combination of an Object class and an Attribute to form a more specific ‘data element concept’. For E.g.: Application ID, building details that are associated with a Data Entity (Such as Building Plan Approval)

iv. Data Entities

Entities were created to help users to locate their data elements from the entire list. However, this grouping should not be confused with data sets. Data sets are list of data elements required for a certain program or application to function and should be created choosing relevant data elements from various entities e.g. BPA, Trade License, Property Tax etc.

v. Digi Locker

Digi Locker is a secure cloud based platform for storage, sharing and verification of documents & certificates

vi. Domain

A sub-category under an Information Technology field is a Domain; specific purpose within a “Domain” is known as “Area”. For example, “Document type for Web publishing content” is one Area under the “Presentation” domain.

vii. E-governance

A procedural approach in which the Government and the citizens, businesses, and other stakeholders are able to transact all or part of their activities using Information and Communication Technology tools.

viii. Interoperability

The ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.


ix. Metadata

Metadata is data about data. Metadata describes how and when and by whom a particular set of data was collected. Metadata is essential for understanding the information stored.


3.2 Depicted Symbols


Domain is depicted as  for e.g. Building Plan Approval

Data Entities are depicted as  for e.g. Building Details

Channels are depicted as  for e.g. Building Plan Approval Channels

Stakeholders are depicted as  for e.g. Stakeholder Matrix

Processes are depicted as  for e.g. Application Creation, Acknowledgement

Reports & KPIs are depicted as  for e.g. Demand Balance Collection Register

3.3 Abbreviations

AAI	Airport Authority of India
AMASR Act	Ancient Monuments and Archaeological Sites and Remains Act

API	Application Programming Interface
BBL	Building Bye Laws
BPA	Building Plan Approval
BPC	Building Permission Certificate
BPID	Building Permission Identification Document/Number
BSID	Building Surveyor Identification Document/Number
BSL	Building Surveyor License
CDG	Centre for Digital Governance
CSC	Common Service Centre
DCB	Demand Collection Balance
DMA	Directorate of Municipal Administration
DRC	Development Rights Certificate
FAR	Floor Area Ratio/Floor Space Index (FSI)
FY	Financial Year
GST	Goods and Services Tax
ICT	Information and Communication Technology
ID	Identification Document/Number
IVR	Interactive Voice Response
KPI	Key Performance Indicators
LLP	Limited Liability partnership
LPID	Layout Plan Identification Document/Number
LUC	Land Use Change
Ltd.	Limited

MBBL	Model Building Bye Laws
MOA	Memorandum of Association
MoHUA	Ministry of Housing & Urban Affairs
NDC	No Due Certificate
NGO	Non-Governmental Organisation
NIUA	National Institute of Urban Affairs
NUDM	National Urban Digital Mission
NUIS	National Urban Innovation Stack
NOC	No Objection Certificate
OCCC	Occupancy-cum-Completion Certificate
PAN	Permanent Account Number
PID	Property Identification Number
PTIN	Property Tax Identification Number
Pvt. Ltd	Private Limited
SI	System Integrators
SLB	Service Level Benchmarks
SLG	Service Level Guarantee
SMS	Short Message Service
TCPO	Town & Country Planning Organisation
TDR	Transferable Development Rights
UGD	Underground Drainage
ULB	Urban Local Body/Bodies
UPIC	Unique Property Identification Code
UPYOG	Urban Platform for delivery of Online Governance

W&S	Water and Sewerage
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4 BUILDING PLAN APPROVAL

A building is a constructed structure made of materials that can be used for human habitation or other purposes, but excludes tents and tarpaulin shelters. In order to construct or modify a building, a building permit must be obtained from the Urban Local Body (ULB) or urban development authority. This is a certificate of permission issued by the concerned authorities to ensure that the construction activity adheres to building rules, regulations, byelaws, and standards. The building plan approval system ensures that the minimum standards for building height, size, ventilation, and other factors are enforced, as per the National Building Bye Laws/National Building Codes or Building Bye laws defined by the State Authorities.

Building plan approval is a statutory requirement that ensures compliance with building rules, regulations, and standards. Land use and construction of buildings are state subjects and have been included as a municipal function in the XIIth Schedule of the Constitution of India under Article 243 (W). In 2014, the Government of India launched an initiative to enhance "Ease of Doing Business" in the construction sector, which included the introduction of concepts such as Common Application Form, Risk based Inspection, and Common Occupancy-Cum Completion form.

Under this initiative, an application for Joint Site Inspection requires all inspections related to Fire, Water, Sewage, Environment, Heritage, and Archaeological factors to be conducted simultaneously. Obtaining various NOCs and approvals from autonomous bodies and ministries before the approval of building plans by the ULB is mandatory. A common application form ensures transparency and efficiency in obtaining the required No Objection Certificates (NOC). Checklists are readily available at the ULBs/development authorities or parastatals in the form of a ready reckoner for architects/planners that can help citizens, architects, builders, and designers to incorporate the necessary provisions for approval.

It is illegal to commence construction without the necessary permissions and approvals from the relevant authorities. Every building is expected to submit an application in the required format and obtain approval before commencing construction. Different authorities are set up to deal with the various permissions required for approval of the project, and the process may differ from state to state and city to city.

Building permission is granted subject to stringent scrutiny, starting with the identification and authentication of the land, its geo-location, safety and regulation standards, distance from the road and surrounding buildings, height, and other criteria set by the Municipal authorities, along with the building plan. Urban local bodies/parastatals/development authorities are authorized to issue building plan approvals in urban areas and are using modern technology, such as information communication and technology, to improve their performance. The authority responsible for administering the National Building Codes 2016, such as Urban Local Body/Urban Development Authority/Industrial Development Authority, or any other authority as notified by the State Government, can also issue building plan approvals.

Taxonomy for building plan approval captures important data elements, entities, their properties, categories, subcategories, parameters, and specifications within this domain as well as other associated areas. Subsections in section 2 also define all the key terms in the building plan approval domain comprehensively.

A well-structured building plan approval taxonomy helps by:

- a) identification and regulation of buildings and land use enabling effective enforcement and regulation
- b) building accountability and ensuring transparency
- c) building confidence among the property owners to have a habitable space
- d) identification and process key data elements to enable evidence-based decision & policy making

5 TAXONOMY FOR BUILDING PLAN APPROVAL

While building the knowledge models for Building Plan Approval systems, it is imperative to consider entities that are interlinked with Building Plan Approval. **Building Plan Approval** is a fee-based **Municipal Revenue** charged against permission for the construction of a **Building, Assessment, Inspection** and **Billing and Payment** are the processes that operationalise the Revenue mobilization within a ULB. Hence, taxonomy for Building Plan Approval cannot be built in a silo and needs to be accompanied by entities like Building Plan Approval, Channels, Stakeholders, associated processes reports and KPIs.

Building Plan Approval

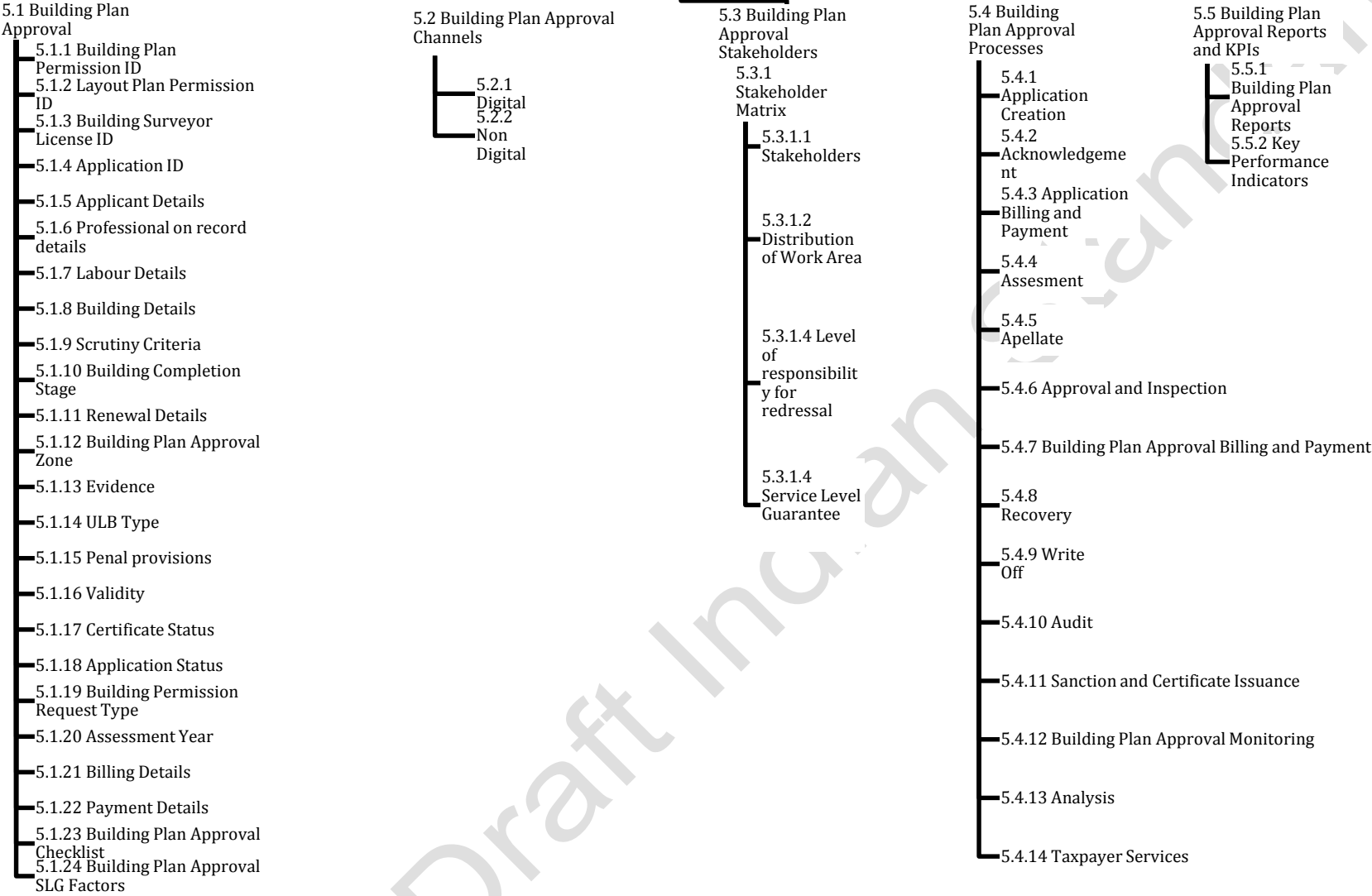


Fig. 1 Taxonomy of Building Plan Approval

NOTE — This is a partial depiction of the Building Plan Approval Taxonomy.
Detailed depiction of the taxonomies are rendered in the subsections of this document.

The categorizations and sub-categorizations of terms used in Building Plan Approval taxonomy are summarized in **5.1** to **5.5**. The categorizations and classifications primarily establish hierarchical relationship, and as a whole yield the taxonomy around Building Plan Approval.

5.1 Building Plan Approval

Building Plan Approval is a document issued by the respective ULBs or authorities which certifies that a building is constructed as per the approved plans as per the defined building bye-laws and building codes. Sub-components in this section describe important components of a Building Plan Approval entity.

5.1.1 Building Plan Permission ID

A Building Plan Permission ID (BPID) is the unique identifier allotted to a building plan by the authorized body or organisation for the purpose of building plan permission records. Typically, the BPID is generated after the completion of the assessment and inspection of the building plan by the ULBs/development authorities or parastatals officials and the payment of building permit fees by the applicant.

5.1.2 Layout Plan Permission ID

A Layout Plan Permission ID (LPID) is the unique identifier allotted to a layout plan by the authorized body or organisation for the purpose of layout plan permission records. Typically, the LPID is generated after the completion of assessment and inspection of the layout plan by the ULBs/development authorities or parastatals officials and payment of layout plan permission fees by the applicant.

No person shall carry out any development or redevelopment including sub-division on any plot or land (not forming part of any approved layout plan or scheme) or cause to be done without obtaining approval from the Authority for the layout plan (Town and Country Planning Organisation, 2016) .

5.1.3 Building Surveyor License ID

A Building Surveyor License ID (BSID) is the unique identifier allotted to a land surveyor by the ULBs/development authorities or parastatals for the purpose of land surveyor and building plan permission records. Typically, the Building Surveyor License ID is generated after the completion of assessment and inspection of the Land Surveyor Details by the ULB officials and payment of License fees by the applicant.

5.1.4 Application ID

An Application ID is a unique application identifier that will be generated after submitting the application form successfully. The Application ID can be used to check status of the filled application, get duplicate bills, receipts etc.

5.1.5 Applicant Details

Applicant details means the details of individual or group of individuals who holds the building plan approval for the building such as name of all partners, mobile numbers, addresses, age, proofs of identity, email ids, photographs and partnerships. Applicant can be building surveyor, owner of property or an organisation.

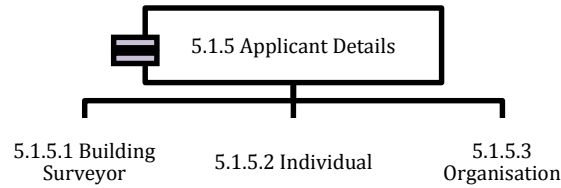


Fig. 2 Taxonomy for Applicant Details

5.1.5.1 Building Surveyor

Qualified professionals who have been registered with the Authority as per the Qualification and competence given in Appendix 'E' of Model Building Bye Laws/ by the body governing such profession and therefore possess the license to provide professional services in Building construction

5.1.5.2 Individual

Application for building permission submitted by the individual/owner of the property.

5.1.5.3 Organisation

Application for building permission or layout permission submitted by the organisation (private or government based on ownership).

5.1.6 Professional On Record Details

This means the details of the professional of the building who is responsible for drafting or approving the building plan/layout plan before submitting it to the ULB such as name of the professional, address of the professional, email id or mobile number of the professional etc. The professional could be architect, designer, civil engineer, structure engineer etc

5.1.7 Labour Details

This means details of labour associated with the construction of buildings such as number of persons working on site, their age, gender etc. These details will help the authorized body or organisation to during the inspections in terms of assessing child labour, exploitation of construction workers etc

5.1.8 Building Details

Building is any structure for whatsoever purpose and of whatsoever materials constructed and every part thereof whether used as human habitation or not and includes foundation, plinth, walls, floors, roofs, chimneys, plumbing and building services, fixed platforms, verandah, balcony, projection (National Building Code Sectional Committee, CED 46, 2016).

Building details in a building plan approval includes physical attributes of the building such as area, built-up space, number of floors, etc. which are used during assessment process. A building plan approval should be linked with property ID to fetch relevant property details from municipal property system, which help in identifying the use, nature, and materials of the building.

- 5.1.8.1

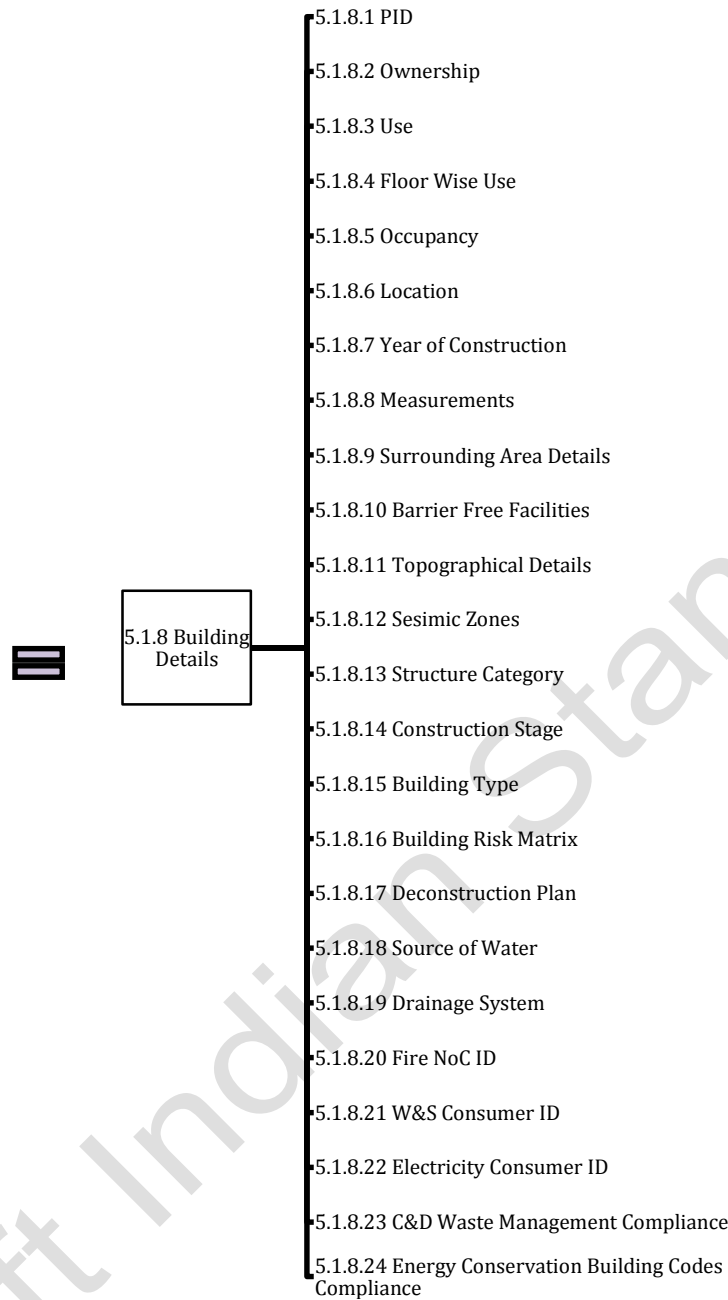


Fig. 3 Taxonomy for Building Details

5.1.8.1 Property ID

A property ID (PID) or property tax identification number (PTIN) or Unique Property Identification Code (UPIC) is the unique identification number allotted to a property by the ULB for the purpose of property tax records. Typically, the PID/ PTIN is generated after the first-time enumeration of the property and its verification by the ULB officials. (See Clause 5.1, IS 18006 (Part 3/Sec 1) : 2021).

PID may be linked to the building plan permission typically known as Building Plan Compliance.

5.1.8.2 Ownership

Property ownership is the state or fact of exclusive rights and control over immovable property. Property may be owned by individuals or organisations. (See Clause 5.1, IS 18006 (Part 3/Sec 1): 2021)

5.1.8.3 Use

The purpose for which a building/property is being put to use. It determines factors like the rate of property tax, building permits, trade licenses etc. The usage of the building for which building permission is applied can be residential buildings, educational buildings, institutional buildings or any other as defined by the state building bye laws or rules. (See Clause 5.1, IS 18006 (Part 3/Sec 1): 2021).

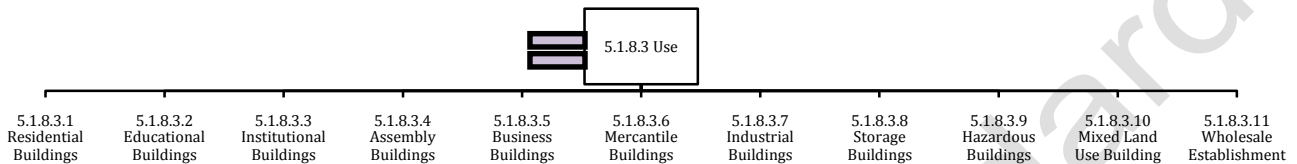


Fig. 4 Taxonomy for Use

5.1.8.3.1 Residential Buildings

Residential buildings include any building in which sleeping accommodation is provided for normal residential purposes with or without cooking or dining or both facilities except as mentioned in clause 5.1.8.3.5 of this document. These can be subdivided as follows (National Building Code Sectional Committee, CED 46, 2016);

- a) Lodging or rooming houses
- b) One- or two-family private dwellings
- c) Dormitories
- d) Apartment houses (flats)
- e) Hotels
- f) Hotels (starred)

5.1.8.3.2 Educational Buildings

These shall include any building used for school, college, other training institutions, for day care purposes involving assembly for instructions, education or recreation for not less than 20 students. These can be subdivided as follows (National Building Code Sectional Committee, CED 46, 2016);

- a) Schools up to senior secondary levels
- b) All other/training institutes under single management with no less than 100 students

5.1.8.3.3 Institutional Buildings

These shall include any building or part thereof which is used for purposes, such as medical or other treatment or care of persons suffering from physical or mental illness, disease or infirmity; care of infants, convalescents or aged persons and for penal or correctional detention in which the liberty of the inmates is restricted. Institutional buildings may provide sleeping accommodation for the occupants. These can be subdivided as follows (National Building Code Sectional Committee, CED 46, 2016);

- a) Hospitals and sanatoria
- b) Custodial institutes
- c) Penal and mental institutes

5.1.8.3.4 *Assembly Buildings*

These shall include any building or part of a building, where number of persons not less than 50 gather for amusement, recreation, social, religious, patriotic, civil, travel and similar purposes, for example, theatres, motion picture houses, assembly halls, museums, skating, rinks, gymnasiums, restaurants, places of worship, dance halls, club rooms, passenger stations and terminals of air, surface and marine public transportation services recreation piers and stadia etc. These can be subdivided as follows (National Building Code Sectional Committee, CED 46, 2016);

- a) Buildings having a theatrical or motion picture or any other stage and fixed seats for over 1000 persons
- b) Buildings having a theatrical or motion picture or any other stage and fixed seats for up to 1000 persons
- c) Buildings without a permanent stage having accommodation for 300 or more persons but no permanent seating arrangement
- d) Buildings without a permanent stage having accommodation for less than 300 persons with no permanent seating arrangements
- e) All other structures including temporary structures designed for assembly of people not covered by other sub divisions
- f) Building having mixed occupancies providing facilities such as shopping, cinema theatres and restaurants
- g) All other structures elevated or underground, for assembly of people not covered.

5.1.8.3.5 *Business Buildings*

These shall include any building or part of a building which is used for transactions of business other than covered in clause 5.1.8.3.1 of this document. These can be subdivided as follows (National Building Code Sectional Committee, CED 46, 2016);

- a) Offices, banks, professional establishments, like offices of architects, engineers, doctors, lawyers and police stations
- b) Laboratories, research establishments, libraries and test houses
- c) Computer installations
- d) Telephone exchanges
- e) Broadcasting stations and TV stations

5.1.8.3.6 *Mercantile Buildings*

These shall include any building or part of a building which is used as shops, stores, market, for display and sale of merchandise, either wholesale or retail. These can be subdivided as follows (National Building Code Sectional Committee, CED 46, 2016);

- a) Shops, stores, departmental stores markets with area up to 500 m²
- b) Shops, stores, departmental stores markets with area more than 500 m²
- c) Underground shopping centres, storage and service facilities incidental to sale of merchandise and located in the same building shall be included under this group

5.1.8.3.7 *Industrial Buildings*

These shall include any building or part of a building or structure, in which products or materials of all kinds and properties are fabricated, assembled, manufactured or processed for example, assembly plants, industrial laboratories, dry cleaning plants, power plants, generating units, pumping stations, fumigation chambers, laundries, buildings or structures in gas plants, refineries, dairies and saw mills etc. These can be subdivided as follows (National Building Code Sectional Committee, CED 46, 2016);

- a) Buildings used for low-hazard industries
- b) Buildings used for moderate hazard industries
- c) Buildings used for high-hazard industries

5.1.8.3.8 *Storage Buildings*

These shall include any building or part of a building used primarily for the storage or sheltering (including servicing, processing or repairs incidental to storage) of goods, ware or merchandise (except those that involve highly combustible or explosive products or materials) vehicles or animals, for example, warehouses, cold storage, freight depots, transit sheds, storehouses, truck and marine terminals, garages hangers, grain elevators, barns and stables. Storage properties are characterized by the presence of relatively small persons in proportion to the area (National Building Code Sectional Committee, CED 46, 2016).

5.1.8.3.9 *Hazardous Buildings*

These shall include any building or part of a building which is used for the storage, handling, manufacture or processing of highly combustible or explosive materials or products which are liable to burn with extreme rapidity and or which may produce poisonous fumes or explosions for storage, handling, manufacturing or processing which involve highly corrosive, toxic or noxious alkalis, acids or other liquids or chemicals producing flames, fumes and explosive, poisonous , irritant or corrosive gases; and for the storage , handling or processing of any material producing explosive mixtures of dust which result in the division of matter into fine particles subject to spontaneous ignition (National Building Code Sectional Committee, CED 46, 2016).

5.1.8.3.10 *Mixed Land Use Building*

A building partly used for non-residential activities and partly for residential purpose

5.1.8.3.11 *Wholesale Establishment*

An establishment wholly or partly engaged in wholesale trade and manufacture, wholesale outlets, including related storage facilities, warehouses and establishments engaged in truck transport, including truck transport booking agencies

5.1.8.4 *Floor Wise Use*

This means the use of the floor of the building for which the application is applied. The originator/applicant should submit floor wise details along with layout plans for building permission.

5.1.8.5 *Occupancy*

The principal occupancy for which a building or a part of a building is used or intended to be used; for the purposes of classification of a building according to occupancy, occupancy shall be deemed to include the subsidiary occupancies which are contingent upon it (National Building Code, 2016). **(See Clause 5.1.4, IS 18006 (Part 3/Sec 1) : 2021).**

5.1.8.6 *Location*

Location (address of the building) provides the particulars of the place where the building is situated such as ward, zone, tehsil in which the building is located, nearby fire station etc. It also indicates the GIS positioning of a property with respect to the urban base map. They are exemplified in Annex A. **(See Clause 5.1, IS 18006 (Part 3/Sec 1) : 2021).**

5.1.8.7 *Year of Construction*

This means the year in which the construction of the building is initiated and completed as mentioned in the building plan approval application has been completed.

5.1.8.8 Measurements

Measurements of a property are values discovered by measuring the corresponding size, shape and/or area of property. For Building permission, applicants need to provide information and evidence related to plot area, covered area, parking area, number of towers, height of the building or any other measurements related to the building that are required for building plan approval as per the building bye laws. Measurements can have certain specifications associated with it. They are exemplified in Annex A. (See Clause 5.1, IS 18006 (Part 3/Sec 1) : 2021).

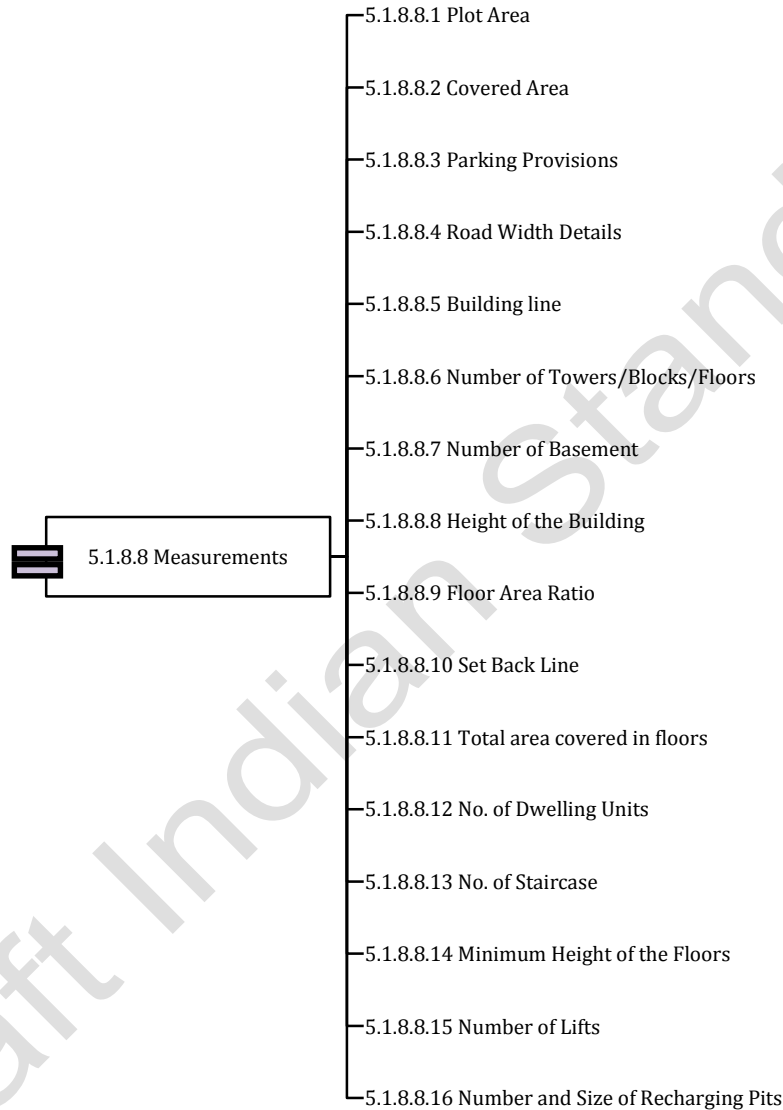


Fig. 5 Taxonomy For Measurements

5.1.8.8.1 Plot Area

Plots to be used for the development should be located in an approved layout plan, comprehensive plans or sub division plans as prepared and approved by competent authorities/ as per policy of the Government of India / State Governments.

5.1.8.8.2 Covered Area

The ground area covered immediately above the plinth level covered by the building but does not include the space covered by,

- a) Garden, rockery, well and well structures, plant nursery, water pool, swimming pool (if uncovered), platform round a tree, tank, fountain, bench, chabutra with open top and unenclosed on sides by walls and the like;
- b) Drainage culvert, conduit, catch-pit, gully-pit, chamber, gutter and the like;
- c) Compound wall, gate, slide/ swing door, canopy, and areas covered by *chajja* or similar projections and staircases which are uncovered and open at least on three sides and also open to sky

5.1.8.8.3 *Parking Provisions*

Total ground area covered by the building for parking facility inside the premises.

5.1.8.8.4 *Road Width Details*

The whole extent of space within the boundaries of a road when applied to a new road/street as laid down in the city survey or development plan or prescribed road lines by any act of law and measured at right angles to the course or intended course of direction of such road.

5.1.8.8.5 *Building line*

The line up to which the plinth of building adjoining a street or an extension of a street or on a future street may lawfully extend and includes the lines prescribed, if any, in any scheme and/or development plan. The building line may change from time-to-time as decided by the Authority.

5.1.8.8.6 *Number of Towers/Blocks/Floors*

This means number of towers or blocks mentioned in building plan as per the building regulations, master plan or bye laws by the authorized body or organisation.

5.1.8.8.7 *Number of Basement*

This means number of basements mentioned in building plan as per the building regulations, master plan or bye laws by the authorized body or organisation.

5.1.8.8.8 *Height of the Building*

The vertical distance measured i) In the case of flat roofs from the average level of the front road and continuance to the highest point of the building. ii) In case of pitched roofs up to the point where the external surface of the outer wall intersects the finished surface of the sloping roof and iii) In the case of gables facing the road midpoint between the eaves level and the ridge. Architectural features serving no other function except that of decoration shall be excluded for the purpose of measuring heights. The height of the building shall be taken up to the terrace level for the purpose of fire safety requirement.

5.1.8.8.9 *Floor Area Ratio*

The quotient obtained by dividing the combined covered area (plinth area) of all floors, except areas specifically exempted under these regulations, by the total area of the plot, viz.:

$$FAR = \frac{\text{Total covered area on all floors}}{\text{Plot Area}}$$

5.1.8.8.10 *Set Back Line*

A line usually parallels the plot boundaries or centre line of a road and is laid down in each case by the Authority or as per recommendations of the Master/Zonal Plan, beyond which nothing can be constructed towards the plot boundaries except with the permission of the Authority.

5.1.8.8.11 *Total area covered in floors*

This means the total area covered by each floor and the total area covered by all floors as per the building plan submitted.

5.1.8.8.12 *No. of Dwelling Units*

This means the number of dwelling units as per the building plan or layout plan submitted for building plan approval.

5.1.8.8.13 *No. of Staircase*

This means the number of staircases as per the building plan or layout plan submitted for building plan approval.

5.1.8.8.14 *Minimum Height of the Floors*

This means the minimum height of the floors as per the building plan submitted for building plan approval. In case of floors with different heights the floor with minimum height needs to be specified.

5.1.8.8.15 *Number of Lifts*

This means the number of lifts as per the building plan or layout plan submitted for building plan approval.

5.1.8.8.16 *Number and Size of Recharging Pits*

This means the number and size of rainwater recharging pits as per the building plan or layout plan submitted for building plan approval.

5.1.8.9 *Surrounding Area Details*

This means details of the surrounding area of the building such as open spaces, vertical openings, fire stop etc

5.1.8.10 *Barrier Free Facilities*

This means the facilities for barrier free design and provision of accessible spaces to all for e.g.,: stairs, toilets, railing wherever required. as per The Rights of Persons with Disabilities Act, 2016, National Building Code of India 2016, Harmonised Guidelines and Space standards for Barrier Free Environment for Persons with Disabilities 2017, MOHUA, GoI. It is recommended that the buildings shall meet the minimum requirements as stated by the National/State Acts/Regulations or Rules.

5.1.8.11 *Topographical Details*

This means the details of the area in terms of roads, railways, power transmission lines, slopes, elevations, rivers, lakes and geographical names. The topographical details may vary from one place to another and the authorized body or organisation may define additional requirements for building plan approvals accordingly.

5.1.8.12 *Seismic Zone*

Earthquakes are caused by the movement of tectonic plates, the boundaries of the plates are the weak zones where earthquakes are more likely to occur. The weak zones are also known as seismic or fault zones. The construction of the building shall comply with BIS Standards on Earthquake Resistant Buildings. The digital application for Building Plan Approval may add a Seismic Zonation Map for automated scrutiny of the plan approvals.

5.1.8.13 *Structure Category*

The construction of the building depends on the type of materials and design, which are essential factors that augment the building structure's resistive capacities from burning out due to fire, and prevent the rapid spread of fire, smoke, or fumes which may contribute to the loss of lives and property.

5.1.8.14 *Construction Stage*

The construction stage refers to the current stage of construction of a building during which the building permit is applied, such as pre-construction, construction or post-construction. (See Clause 2.1.5.10, Fire NOC Knowledge Standard, MoHUA).

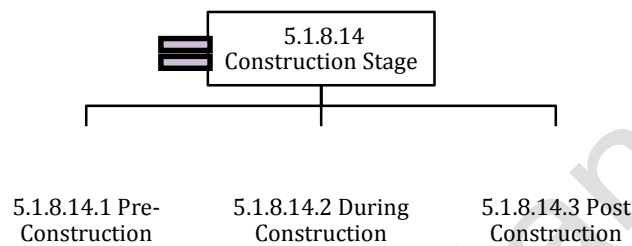


Fig. 6 Taxonomy for Construction Stage

5.1.8.14.1 *Pre-Construction*

The pre-construction phase includes creating a strategic plan for the project, creating a design, securing permits or entitlements, and gathering the labour and resources required for construction. The builder may apply for building permission at this stage by submitting layout designs and plans. The application shall include estimated quantities of different materials to be used in construction.

5.1.8.14.2 *During Construction*

The construction phase refers to the ongoing physical construction. The builder may apply for building permission at this stage by submitting layout designs and plans.

5.1.8.14.3 *Post Construction*

The post-construction phase is where the physical construction is completed. The applicant/owner/professional may apply for building permission at this stage. The application shall include actual quantities of different materials used in construction, along with the location/part of the building where they have been used

5.1.8.15 *Building Type*

This refers to the type of building for which the building permission is sought. These building types can be defined based on design, height, special features, safety or maintenance level such as detached building, multi-storeyed buildings, special buildings, slum etc.

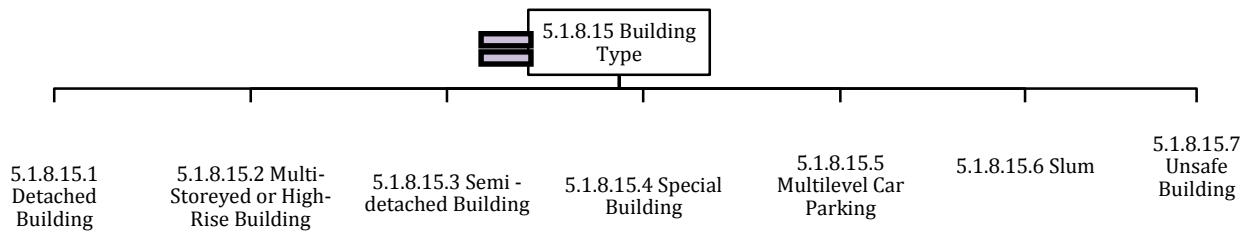


Fig. 7 Taxonomy for Building Type

5.1.8.15.1 Detached Building

This includes a building with walls and roofs independent of any other building and with open spaces on all sides within the same plot.

5.1.8.15.2 Multi-Storeyed or High-Rise Building

A building above 4 stories, and/or a building exceeding 15 meters or more in height (without stilt) and 17.5M (including stilt).

5.1.8.15.3 Semi-detached Building

A building detached on three sides with open space as specified in these regulations.

5.1.8.15.4 Special Building

This includes all buildings like assembly, industrial, buildings used for wholesale establishments, hotels, hostels, hazardous, mixed occupancies with any of the aforesaid occupancies and centrally air conditioned buildings having total built up area exceeding 500 sq. m.

5.1.8.15.5 Multilevel Car Parking

A building partly below ground level having two or more basements or above ground level, primarily to be used for parking of cars, scooters or any other type of light motorized vehicle.

5.1.8.15.6 Slum

Buildings that are in poor condition of maintenance or have compromised habitability due to poor ventilation, sanitation or otherwise are termed slums. These are generally declared or notified as slums under relevant legislation by competent authority (reference). As per Census of India, 2011, a Slum, has been defined as residential areas where dwellings are unfit for human habitation by reasons of dilapidation, overcrowding, faulty arrangements and design of such buildings, narrowness or faulty arrangement of street, lack of ventilation, light, or sanitation facilities or any combination of these factors which are detrimental to the safety and health. Slums have been categorized and defined as of the following three types: (i) Notified Slums; (ii) Recognized Slums; (iii) Identified Slums.

5.1.8.15.7 Unsafe Building

This includes a building which:

- a) Is structurally unsafe, or
- b) Is insanitary, or
- c) Is not provided with adequate means of ingress or egress or
- d) Constitutes a fire hazard or

- e) Is dangerous to human life or
- f) In relation to its existing use, constitutes a hazard to safety or health or public welfare by maintenance, dilapidation or abandonment.

All unsafe buildings /structures will require to be restored by repairs, demolition or dealt with as directed by the Authority. The relevant provisions of the Act shall apply for procedure to be followed by the Authority in taking action against such buildings.

5.1.8.16 Building Risk Matrix

As per the Model Building Bye Laws 2016, there is a need to make provisions for fast-tracking building permission procedures for all non-automatic approvals. Therefore, in the spirit of 'Ease of Doing Business', the buildings have been classified further on the basis of risk parameters/ risk based classification, to clear the building permits on a fast track system. The authorized body or organisation in consultation with all parastatal bodies involved, shall identify risk-based classification as per the Use (**See Clause 5.1.8.3**) such as residential, industrial, commercial, institutional buildings etc. and prepare risk based matrix.

The Building Risk Matrix is based on the criteria such as Plot Area (**See Clause 5.1.8.8.1**), Height of the Building (**See Clause 5.1.8.8.8**) etc.. For e.g.: as mentioned in Model Building Bye Laws, 2016.

5.1.8.17 Deconstruction Plan

A deconstruction plan shall be required at the end of life or a major upgrade involving parts of the building to be demolished is undertaken. Such a plan shall include plan for recycling materials and for safe disposal of non-recyclable materials.

5.1.8.18 Source of Water

Source of water means the channel through which water has been supplied to the property such as bore well, tube well, or water supplying agency such as Jal board or Municipal Authority.

5.1.8.19 Drainage System

A drainage system refers to the type of system used to collect, treat and discharge wastewater from a property. The type of drainage systems could be defined as follows,

- a) Natural Drainage - The inlet and outlet point of the natural drainage system should be maintained with an adequate size of channel for ensuring unrestricted flow of water.
- b) Closed drain - forms a complex network underground. The primary refuse from individual areas is collected and transported to the main network which finally goes to a treatment plant.
- c) Open-drain - is mostly used to collect wastewater that is not sewage

5.1.8.20 Fire NOC ID

A Fire NOC ID is the unique identifier allotted to a Fire NOC document by the ULB for the purpose of NOC record management. Typically, the Fire NOC ID is generated after the completion of the assessment, an inspection of the property by the ULB officials, payment of Fire NOC fees by the applicant and subsequent approval by the ULB. (**See Clause 2.1.1 Fire NOC Knowledge Standard, MoHUA**)

5.1.8.21 W&S Consumer ID

Water & Sewerage (W&S) Consumer ID is a unique connection identifier for the water & sewerage connection of a property. A BPID or LPID should be linked with W&S consumer ID to fetch relevant

details from the municipal W&S registry and vice versa. This linking may also be used to identify revenue leakages. (See Clause 2.1.1 Water & Sewerage Knowledge Standard, MoHUA).

5.1.8.22 Electricity Consumer ID

Electricity Consumer ID is a unique connection identifier for electricity connection of a property. A Building Plan Permission ID (BPID) or Layout Plan Permission ID (LPID) should be linked with electricity consumer ID to fetch relevant details from the municipal electricity registry and vice versa. This linking may also be used to identify revenue leakages.

5.1.8.23 Construction and Demolition Waste Management Compliance

The developer shall ensure that all construction and demolition (c&d) waste generated during the pre-construction, construction and post-construction phase are disposed of in compliance with the Construction and Demolition Waste Management Rules, 2016 issued by CPCB or as per state specific rule/regulations or laws.

5.1.8.24 Energy Conservation Building Codes Compliance

The developer shall ensure compliance to the Energy Conservation Building Code 2017 (ECBC) and Eco Niwas Samhita (ECBC - Residential, 2018) as developed by the Bureau of Energy Efficiency and its amendments, consistent with the provisions adopted and notified by the State Government.

5.1.9 Scrutiny Criteria

This means the Criteria on which the building permission application is assessed by the ULB officials. The criteria could be building plans, public utilities and amenities, or green building norms. These criterions will have a set of parameters as per the building bye laws, rules or regulations as prescribed by the State or authorized body or organisation.

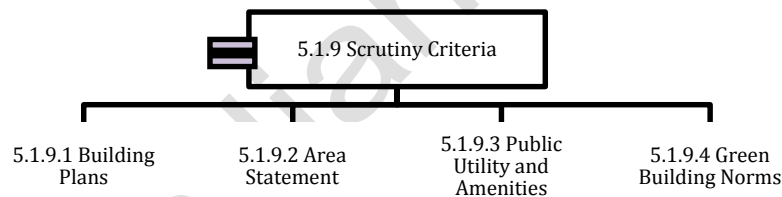


Fig. 8 Taxonomy for Scrutiny Criteria

5.1.9.1 Building Plans

Building Plan means a set of architectural / engineering drawings needed to explain the building construction proposal, to be submitted to the authority for the purpose of seeking approval or intimation. The building plans should have details such as

- a) Layout Plan – means a Plan indicating configuration and sizes of all Use Premises. Each Use Zone may have one or more than one Layout Plan depending upon the extensiveness of the area under the specific Use Zones and vice versa. A layout plan shall have at least two use premises (apart from Recreational, utilities and transportation) and a minimum area of 1 hectare
- b) Contour Plan - A contour plan is a topographical map that uses contour lines to represent the shape and elevation of the land surface. When submitting a building plan for approval, a contour plan is usually required to provide valuable information about the elevation of the land, the location of water bodies, and the position of existing buildings and infrastructure, among other things. The contour plan also helps in determining the

appropriate foundation design and construction techniques that will be required to ensure the stability of the building.

- c) Floor Plan – Buildings with multiple levels have different floor plans for each level- which includes dimension of room, interior and exterior wall doors, windows, stairs and their directions etc.
- d) Structural Plan – This type of plan provides a complete view of the structural aspect of the building which contains location, nomenclature, size and placement of reinforcement, details of structural elements and load carrying members of the building.
- e) Foundation Plan - The foundation plan is a plan view drawing, in section, showing the location and size of footings, piers, columns, foundation walls, and supporting beams. A foundation plan ordinarily includes the footings for foundation walls, piers, and columns (hidden lines).
- f) Septic Tank & Soak Pit Location – means the plan detailing location of septic tanks and soak pits within the property lines.
- g) Ground Water Recharging Point – means the plan detailing the locational points of ground water recharging points within the property lines
- h) Drain Section – means the plan detailing the drains section of the building within the property lines.
- i) Fire Safety Provisions – means fire safety provisions including fire protection requirements as defined in the National Building Code 2016 or Fire Safety Acts, rules or regulations of the state or ULB such as firefighting equipment, wet wiser, first aids etc. Buildings shall be planned, designed and constructed to ensure fire safety and this shall be done in accordance with part IV Fire Protection of the National Building Code 2016, unless otherwise specified in these Bye-Laws.
- j) Plumbing Plan – means the plan detailing the plumbing system within the property lines such as the pipes, fixtures including the water supply and distribution pipes; plumbing fittings and traps; soil, waste, vent pipes, building drains and sewers including their respective connections, devices and water treating or water using equipment etc.
- k) Other Plans – means any other plans as defined in State rule and/or regulations, Acts, Master Plan or Building Bye Laws

5.1.9.2 Area Statement

Area Statement means the summary of area for the building or layout as proposed by the competent professional. This includes calculations and measurements with respect to the design of the building.

5.1.9.3 Public Utility & Amenities

Public Utility and Amenities means plans related to water supply, sewerage, roads and pathways, electricity, EV charging infrastructure requirement, 5G network infrastructure, CNG/LPG network, solid waste management or any other as defined in State rule and/or regulations, Acts, Master Plan or Building Bye Laws.

5.1.9.4 Green Building Norms

Green Building Norms means plans related to provisions of rain water harvesting, renewable sources of electricity such as installation of solar rooftops or solar panels, water treatment facilities plans etc.

or any other as defined in State rule and/or regulations, Acts, Master Plan or Building Bye Laws. The state may include the following as per the relevant laws or for the purpose of incentivisation,

- a) Rain water harvesting
- b) Solar panel installation
- c) Water treatment facilities,
- d) or any other

5.1.10 Building Completion Stage

Building Completion Stage means the stage of construction as mentioned in the building plan approval application. The completion stages are to be intimated by the owner/ULB as per the defined SLGs.

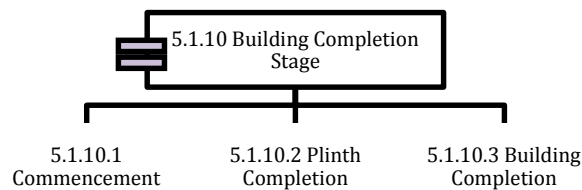


Fig. 9 Taxonomy for Building Completion Stage

5.1.10.1 Commencement

Commencement is the stage when the construction of the building is initiated post scrutiny of the building plan approval application and issuance of commencement certificate by the ULB.

5.1.10.2 Plinth Completion

Plinth Completion is the stage when construction of the plinth is completed by the applicant/owner of the property. Plinth completion date is to be intimated by the applicant to the ULB for subsequent site inspection.

5.1.10.3 Building Completion

Building Completion is the stage when the construction of the building is completed and the same is initiated by the applicant to the ULB for final site inspection and issuance of Occupancy -cum- Completion Certificate (OCCC).

5.1.11 Renewal Details

These are details associated with the previous building permission certificate (BPC)/ building surveyor license (BSL). The renewal of the BPC has to be done within a specific time frame as per the ULB. Renewal details may include:

- a) Old Building Permission ID/Building Surveyor License ID
- b) Property tax receipt
- c) Old Application ID
- d) Professional on record details

5.1.12 Building Plan Approval Zone

Building Plan Approval Zone means the classification of different areas or streets into value zones for the purpose of determining the unit of measurement value of a building plan.

5.1.13 Evidence

Proof of the professional and owner details submitted during registration/ renewal of BPC/ BSL. These can be,

- a) Address proof of the property
- b) ID proof of the applicant such as Aadhaar Card, Passport etc.
- c) PAN of the individual/ organisation
- d) building materials and equipment specifications as per Energy Conservation Building Code 2017, Bureau of Energy Efficiency, Government of India
- e) Actual Bill of Quantities (BoQ) of different materials used in the construction of the building shall be provided by the developer. The ULB shall keep a digital copy of this BOQ to be provided for the preparation of a deconstruction plan at the time of demolition of the building.
- f) Evidence at the time of demolition- Deconstruction Plan to be submitted by the builder/applicant/organisation

5.1.14 ULB Type

Type of the urban local body as per the definition of MoHUA such as Nagar Panchayat, Municipal Council, Cantonment Board or Municipal Corporation (Ministry of Housing and Urban Affairs, 2014).

5.1.15 Penal Provisions

These are the penalties for violation or non-compliance of terms, provisions, rules, and regulations that are required to be followed by the registered entity. Some of the penalties for contravention of the provisions of the building plan approval are stated below (Town and Country Planning Organisation, 2016):

- a) The Authority reserves the right to take action and to debar/blacklist the Town Planner, Architect, Engineer, Supervisor or Plumber, if found to have deviated from professional conduct or to have made any false statement or on account of misrepresentation of any material facts or default either in authentication of a plan or in supervision of the construction against the building Bye-Laws and the sanctioned building plans.
- b) If the sanctioning Authority finds at any time any violation of the building Bye- Laws or misrepresentation of facts, or construction at variance with the sanction or building Bye-Laws, inclusive of the prescribed documents, the Authority shall revoke the sanction and take appropriate action against such professional and such professional shall not be authorized to submit fresh plans till finalization of the case. Before debarring or blacklisting such professional if found to be indulging in professional misconduct or where she/he has misrepresented any material facts, the Authority shall issue a show cause notice with an opportunity of a personal hearing and shall pass an order to debar her/him for submission and supervision of the construction with full justification for the same. An appeal against this order shall lie with the Authority with whom she/he is registered.

5.1.16 Validity

Validity is the time period through which a BPC/BSL is valid.

5.1.17 Certificate Status

This is the current status of validity of building permit/layout permit/building surveyor license.

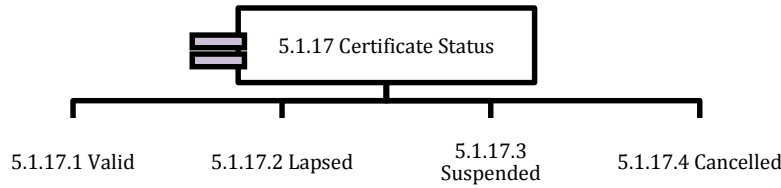


Fig. 10 Taxonomy for Certificate Status

5.1.17.1 *Valid*

This is the status of building permit/land surveyor license when it's within validity.

5.1.17.2 *Lapsed*

This is the status of a permit/land surveyor license when it's beyond validity.

5.1.17.3 *Suspended*

This is the status of building permit/land surveyor license when you lose the right to construction or practice as surveyor temporarily.

5.1.17.4 *Cancelled*

This is the status of building permit/land surveyor license when you lose the right to construction or practice as surveyor permanently cancelled.

5.1.18 *Application Status*

This is the current status of building plan approval/ land surveyor license application.

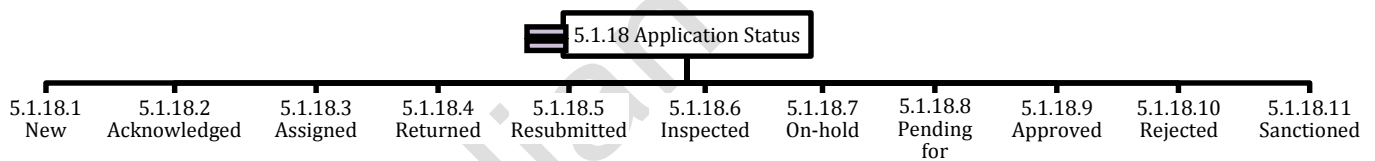


Fig. 11 Taxonomy for Application Status

5.1.18.1 *New*

New application status means that a new building plan approval/ land surveyor license application has been filed. This may or may not be on the system.

5.1.18.2 *Acknowledged*

Acknowledged application status means that the building plan approval/ building surveyor license application has been acknowledged by the municipal department.

5.1.18.3 *Assigned*

Assigned application status means that the building plan approval/ building surveyor license application is assigned to the inspection team and the inspection is planned or in process.

5.1.18.4 *Returned*

Returned application status means that the building plan approval/ building surveyor license application has been returned to the applicant for edits or modifications as per the comments by the relevant authority.

5.1.18.5 *Resubmitted*

Resubmit application status means that the building plan approval/ building surveyor license application has been resubmitted by the applicant post edits or modifications as per the comments by the relevant authority.

5.1.18.6 *Inspected*

Inspected application status means that the building plan approval/ building surveyor license inspection is completed.

5.1.18.7 *On-hold*

On-hold application status means that the building plan approval/ building surveyor license application is put on hold for a reason.

5.1.18.8 *Pending for Payment*

Pending for payment application status means that the building plan approval/ building surveyor license application is pending for payment after successful inspection.

5.1.18.9 *Approved*

Approved application status means that the building plan approval/ building surveyor license is approved. A BPID/BSID/LPID is generated in this case.

5.1.18.10 *Rejected*

Rejected application status means that the building plan approval/ building surveyor license application is rejected after inspection.

5.1.18.11 *Sanctioned*

Sanctioned application status means that the building plan is sanctioned by the municipal department. The applicant will get a completion cum occupancy certificate in this case

5.1.19 *Building Permission Request Type*

Building permission request type is the type of application made to the ULB for building plan approval. It can be for a new building surveyor license, new building plan approval, renewal of license and/or permit or cancellation of existing license and/or permit.

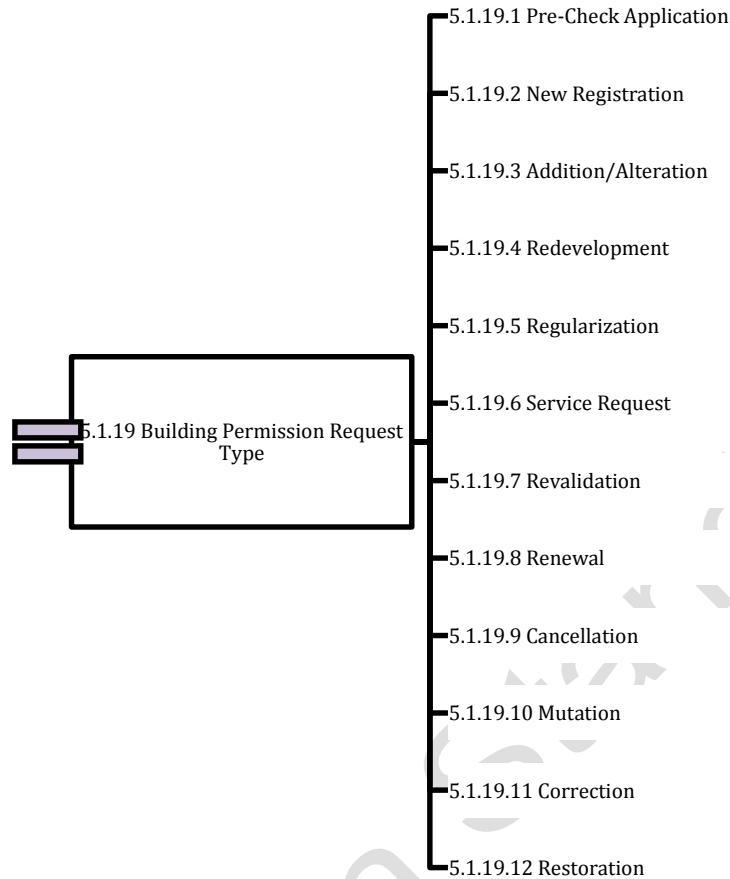


Fig. 12 Taxonomy for Building Permission Request Type

5.1.19.1 Pre-Check Application

Pre-check application means an application by which an applicant/ architect willing to submit their application for Building Plan/ Map Approval to the ULB may submit their application for a PRE-CHECK of the drawing to ensure the compliance to bye-laws and save time in disposal of their application by ULB.

5.1.19.2 New Registration

New Registration means an application for registration for new building plan approval/layout plan approval/ building surveyor license is to be submitted with requisite documents and registration & processing fee along with applicable scrutiny fee.

5.1.19.3 Addition/Alteration

A change from one occupancy to another, or a structural change including an addition to the area or change in height or the removal of part of building, or any change to the structure, such as the construction or removal or cutting into of any wall or part of a wall, partition, column, beam, joist, floor including a mezzanine floor or other support, or a change to or closing of any required means of access ingress or egress or a change to fixtures or equipment" as provided in the Building Bye Laws.

Addition/Alteration means an application for addition/alteration in the already sanctioned building plan. Addition/alteration should be as per the building bye laws, rules and/or regulations or relevant State Acts. In this case the updated building plans are to be submitted for approval with requisite documents and fees.

5.1.19.4 *Redevelopment*

Redevelopment means an application for redevelopment of the existing building. In this case an application with new building plans and requisite documents and registration & processing fees is to be submitted to the ULB.

The redevelopment in whole or part of a building which has ceased to exist due to fire, natural collapse or demolition having been declared unsafe, or which is likely to be demolished by or under an order of the ULB as the case may be and for which the necessary certificate has been given by the Authority shall be allowed subject to the relevant bye-laws. A deconstruction plan (**See 5.1.8.17**) shall be submitted for approval of the urban local body prior to redevelopment. Any redevelopment shall be subject to conditions as maybe prescribed in the approval of the deconstruction plan and related documents.

5.1.19.5 *Regularization*

Regularization means an application for regularizing of the existing land or an area as per the building bye laws and/or Master Plan or notification by the development authority. In this case ULB may notify the property owners and/or applicants about the regularization.

"Regulated area" means any area specified or declared under section 20B under the AMASR Act, 2010.

5.1.19.6 *Service Request*

Service request means an application for service provisioning such as water supply, sewerage, drainage or any other for the applied building plan approval along with requisite application, processing and service fees. The services are needed during the construction as well post-construction.

5.1.19.7 *Revalidation*

The application type to revalidate the building plan permit.

After sanction of building plan, in case the construction could not be started within two years (or five years, as the case may be or as defined in state specific building bye laws/master plans and/or any other rules or regulations) or has been started but could not be completed within the stipulated period, the owner/ applicant may apply for the revalidation of building plans before the sanction has lapsed simply by submitting re- validation fee as per the rate defined in State specific laws and/or Acts for the proposed covered area requested for re-validation. This revalidation of building plans be automatically considered from the date of submission of revalidation fee.

5.1.19.8 *Renewal*

The application type to renew the building plan permit/ building surveyor license. The renewal of the building permit and/or building surveyor license has to be done in a specific time frame as per the ULB/authority.

5.1.19.9 *Cancellation*

Application type to cancel existing building plan permit/ building surveyor license. The ULB/authority officer, after receiving the application with required information, if satisfied about its correctness will remove such establishment/surveyor from the register of sanctioned building permits/ licensed surveyor and cancel the building permit/building surveyor license.

5.1.19.10 Mutation

Application type for transfer of title to an existing building permit. In the case of land transaction, it is commonly noted that the building plan may be valid in favour of the seller for the period when land transaction is conducted. The Building Rules may introduce an option for mutation of such Building Plan Approvals with proper validity to the buyer. If the buyer wishes to proceed with the same plan, they can do so by paying the basic scrutiny fees and Mutation charges.

5.1.19.11 Correction

Application type for correction of existing building plan as suggested by the ULB.

5.1.19.12 Restoration

Application type to restore a suspended building permit/ building surveyor license. The restoration of the building permit/building surveyor license needs to be done within a specific time frame as per the applicable laws and/or rules and regulations within ULB.

5.1.20 Assessment Year

The assessment year is the year for which assessment was done for a building plan permission/building surveyor license.

5.1.21 Billing Details

These are the details of bills generated during the process of application for a new building permit approval/building surveyor license while renewing an old building permit/building surveyor license, redevelopment or restoration.

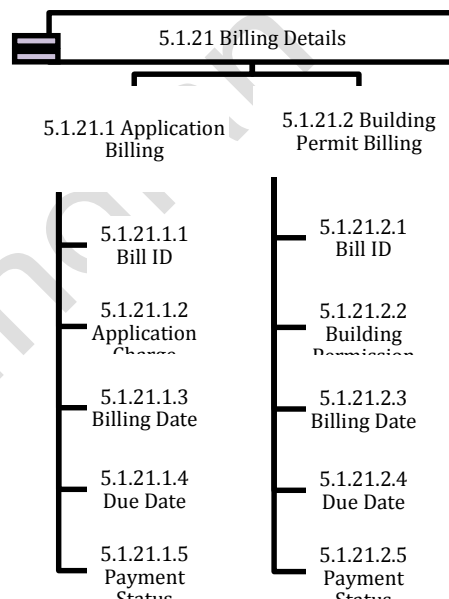


Fig. 13 Taxonomy for Billing Details

5.1.21.1 Application Billing

These are the details of payment made during the process of application for a new building permission certificate/license or while renewing an old permit/license. This includes application charge, bill id, billing date, due date and payment status.

5.1.21.1.1 Bill ID

Bill ID is a unique identifier that identifies applicant bills for accounting purposes.

5.1.21.1.2 Application Charge

An amount of money paid by the applicant while submitting an application of the building plan approval and/or building surveyor license.

5.1.21.1.3 Billing Date

Billing Date is the date on which a bill is generated during the application process.

5.1.21.1.4 Due Date

Due Date is the date on which the bill for a particular application is due for the new application. Upon non-payment of bill by the given due date, a surcharge may be levied on the initial demand by the imposition of a penalty.

5.1.21.1.5 Payment Status

Payment Status is the status of payment against a raised bill.

5.1.21.2 Building Permit Billing

These are the details of payment made during the building permission approval process. These can be generated at the time of plinth completion and/or completion cum occupancy certification.

5.1.21.2.1 Bill ID

See Clause 5.1.21.1.1

5.1.21.2.2 Building Permission Charge

This charge includes charges as per the building completion stage (**See Clause 5.1.10**) or as may be defined by the ULB rules and/or regulations. This may include,

- a) Stacking Charge
- b) Betterment Charge
- c) Inspection fees
- d) Pre-Occupancy Charge
- e) Waste Management Charge
- f) Impact fee (one-time charge)
- g) Labour cess
- h) Or any other as may be defined by the ULB

5.1.21.2.3 Billing Date

See Clause 5.1.24.2.10

5.1.21.2.4 Due Date

See Clause 5.1.21.1.4

5.1.21.2.5 Payment Status

See Clause 5.1.21.1.5

5.1.22 Payment Details

These are the details of payment made during the process of application for a new building plan approval/building surveyor license or while renewing an old building permit and/or building surveyor license.

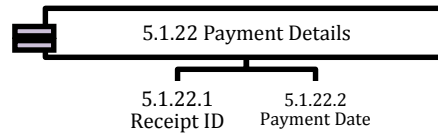


Fig. 14 Taxonomy for Payment Details

5.1.22.1 *Receipt ID*

Receipt ID is a unique identifier which is generated once payment is completed and payment details are captured on the accounting system

5.1.22.2 *Payment Date*

The date on which the building plan fees (application, license or permit) is paid by the applicant

5.1.23 *Building Plan Approval Checklist*

Building Plan Approval Checklist is a list of items, as names or tasks, for comparison, verification, or other checking purposes. These checklists can be of six types: pre-construction checklists, post-construction checklists, drawing checklists, inspection checklists, building surveyor checklists and architect's checklist/citizen checklists.

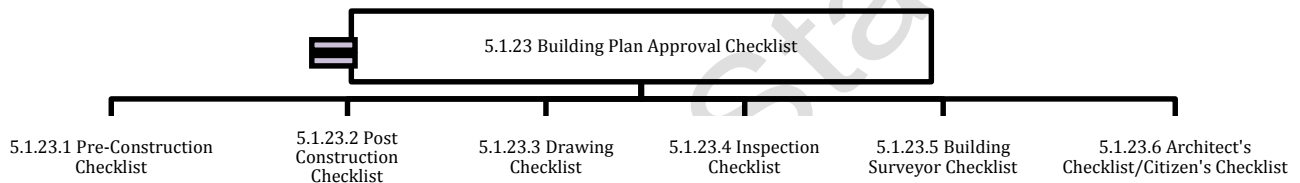


Fig. 15 Taxonomy Building Plan Approval Checklist

5.1.23.1 *Pre-Construction Checklist*

This means a list of items or tasks to compare or verify building regulations at pre-construction stage.

5.1.23.2 *Post Construction Checklist*

This means a list of items or tasks to compare or verify building regulations at post construction stage

5.1.23.3 *Drawing Checklist*

This means a list of items, tasks or requirements to compare or verify building plans as per the drawing manuals by the authorized body or organisation.

5.1.23.4 *Inspection Checklist*

Inspection checklist is used by ULB inspectors to check conformance to relevant rules, safety measures and guidelines workforce, labour, any illegal activity, etc.

5.1.23.5 *Building Surveyor Checklist*

This means a list of items or tasks to compare or verify the qualification of the building surveyor as per the rules and/or regulations defined by the State Acts.

5.1.23.6 *Architect's Checklist/Citizen's Checklist*

This means a list of building related information that needs to be furnished by the architect/ owner/applicant during the application of the building plan approval. The checklist is usually available at the website of ULB or at the ULB office for ready reference of the citizen.

5.1.24 Building Plan Approval SLG Factors

These are important time factors associated with a building plan approval and/or building licensed surveyor application that determine the service level aspect of building plan permission with respect to the timeliness of service provided. This includes the time when application was first registered, inspection days, Service level Guarantee (SLG) and actual turnaround time.

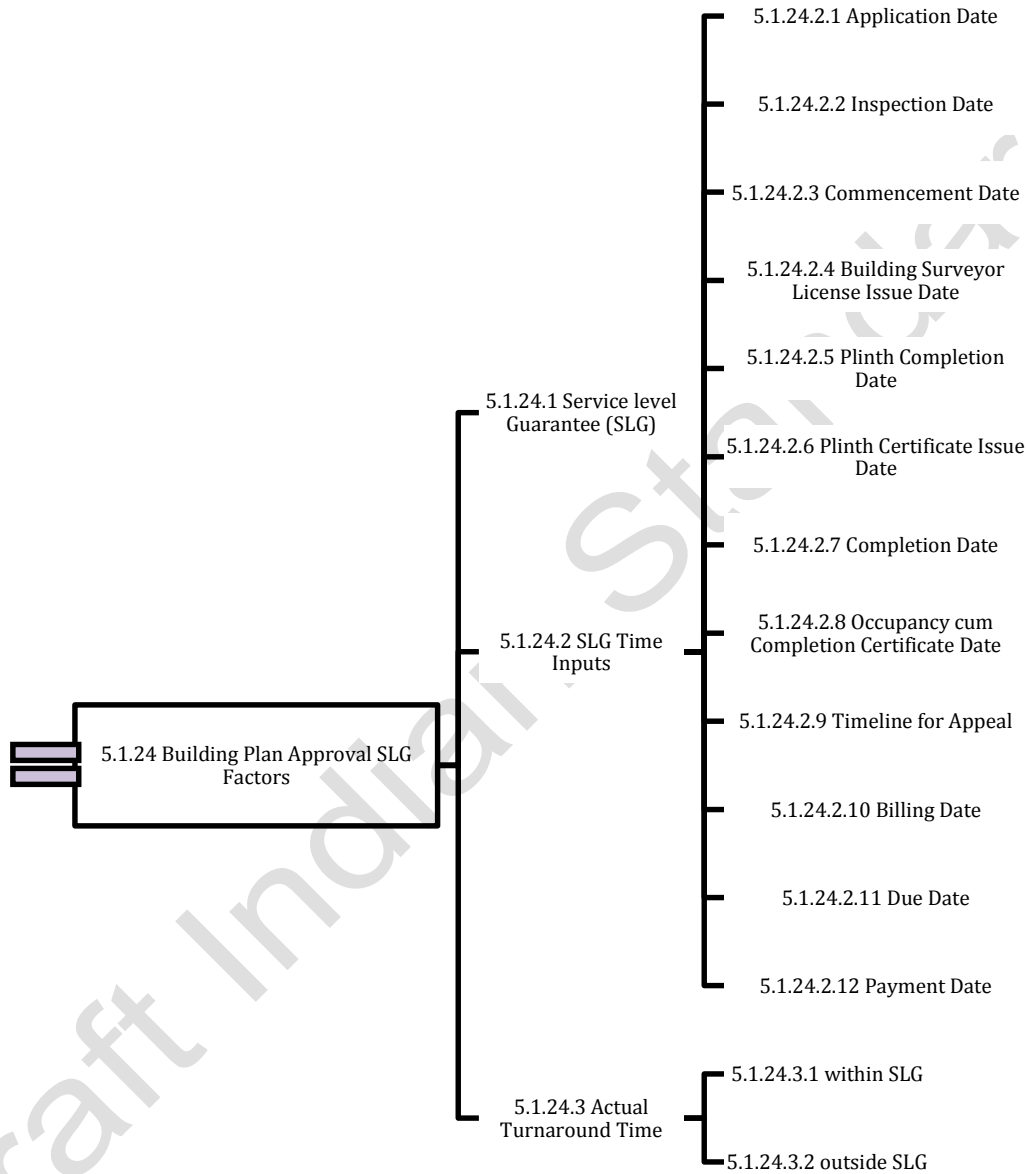


Fig. 16 Taxonomy for Building Plan Approval SLG Factors

5.1.24.1 Service level Guarantee (SLG)

The maximum time that service departments expect to take to complete the building plan approval process. Also called expected compliance time set by the ULB in citizen charter or any public disclosed document for a service in which it should be issued or managed. Public sharing of a comparative picture of various SLGs in the ULB may introduce competition to improve performance.

5.1.24.2 SLG Time Inputs

These are important dates that help capture service level compliances.

5.1.24.2.1 Application Date

Application date is the date on which the application is first submitted by the applicant.

5.1.24.2.2 Inspection Date

Inspection date is the date on which an inspection has been conducted by the ULB inspector.

5.1.24.2.3 Commencement Date

Commencement date is the date on which the building construction activity is started.

5.1.24.2.4 Building Surveyor License Issue Date

The date on which the license is issued to the building surveyor.

5.1.24.2.5 Plinth Completion Date

The date on which the plinth construction is completed.

5.1.24.2.6 Plinth Certificate Issue Date

The date on which the plinth certificate is issued by the ULB post plinth level inspection.

5.1.24.2.7 Completion Date

The date on which the building construction is completed.

5.1.24.2.8 Occupancy cum Completion Certificate Date

The date on which the occupancy cum completion certificate is issued by the ULB post inspection.

5.1.24.2.9 Timeline for Appeal

This is the timeline mentioned in an assessment notice within which an aggrieved person can appeal to the appellate authority.

5.1.24.2.10 Billing Date

Billing Date is the date on which a bill is generated during the application process.

5.1.24.2.11 Due Date

Due Date is the date on which the bill for a particular application is due for the new application. Upon non-payment of bill by the given due date, a surcharge may be levied on the initial demand by the imposition of a penalty.

5.1.24.2.12 Payment Date

The date on which the building plan approval fees and/or building surveyor fees is paid by the applicant.

5.1.24.2.13 Actual Turnaround Time

Actual turnaround time is the actual time taken by the ULB in which a building certificate and/or building surveyor license is issued, cancelled, restored, renewed, or suspended.

5.1.24.2.13.1. Within SLG (Service Level Guarantee)

When a building certificate and/or building surveyor license service is provided within the given SLG (Service level Guarantee) i.e., without exceeding the time period defined.

5.1.24.2.13.2. Outside SLG (Service Level Guarantee)

When a building certificate and/or building surveyor license service is provided beyond the SLG (Service level Guarantee) i.e., exceeding the time period defined.

5.2 Building Plan Approval Channels

Channel / Mode / Method through which building plan approval/ building surveyor license application is being registered by the citizen or information and response is shared by the authorized body or organisation.

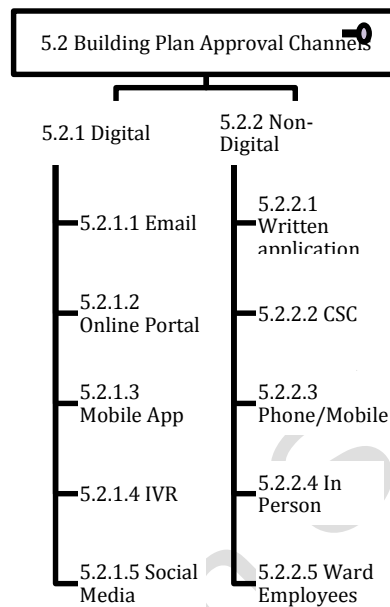


Fig. 17 Taxonomy for Building Plan Approval Channels

5.2.1 Digital

Digital means an electronic way to collect, store, process and transmit data in the desired form. In the context of building plan approval, this refers to processes and corresponding data used by the authority and the individual for building plan approval and building surveyor licensing which is requested or generated in digital form for the purpose of recording, allocation, assessment, follow up, and appeal.

5.2.1.1 Email

Electronic media for transfer of messages and information through the internet.

5.2.1.2 Online Portal

Web portals or web application refers to the websites developed for building plan approval management. This broadly includes an assessment calculator, building plan data, owner's information and facility to pay the license fees through payment gateways linked to the portals. These portals also include a trade license system.

5.2.1.3 Mobile App

A mobile application, also referred to as a mobile app or simply an app, is a computer program or software application designed to run on a mobile device such as a phone, tablet, or watch.

5.2.1.4 Interactive Voice Response (IVR)

Interactive Voice Response (IVR) is a technology that allows humans to interact with a computer-operated phone system through the use of voice and DTMF tones input via a keypad. The call centre operator will listen to the IVR recorded building plan permission application and register the same in the system. The call centre operator may contact the citizen in case information provided is insufficient or any clarification required.

5.2.1.5 Social Media

Social media are interactive technologies that allow the creation or sharing/exchange of information, ideas, interests, and other forms of expression via virtual communities and networks such as Twitter, WhatsApp and Facebook etc.

5.2.2 Non Digital

These are other means (non-digital) by which a request for building plan approval and/or building surveyor license is captured.

5.2.2.1 Written application

A written application refers to a channel for building plan approval and/or building surveyor license which includes a letter in a prescribed format, addressed to Municipal Commissioner, requesting for new or renewal of building plan approval and/or building surveyor license.

5.2.2.2 Common Service Centre (CSC)

A Common Service Centre (CSC) is an information and communication technology (ICT) access point created under the National e-Governance Project of the Indian government.

5.2.2.3 Phone/Mobile

Mobile telephone, also called mobile, is a portable device for connecting to a telecommunications network in order to transmit and receive voice, video, or other data.

5.2.2.4 In Person

A person/s can walk in to the municipal office/ ward office to submit their building plan approval and/or building surveyor license application.

5.2.2.5 Ward Employees

Ward employees are the employees of municipal council or municipal authority, concerned with administrative wards of the city. In terms of building plan approval and/or building surveyor license an application can be submitted through the respective ward employees during their visits where the building is being constructed.

5.3 Building Plan Approval Stakeholders

Building Plan Approval stakeholders are the stakeholders involved in planning, implementation and maintenance of building plan approval function. Participation by all relevant stakeholders ensures sharing a common understanding and involvement in the decision-making process as well as accountability in urban governance. Participation by all stakeholders leads to empowerment and to joint ownership and harmonized access to information connecting multiple urban departments to serve citizens better.



Fig. 18 Taxonomy for Building Plan Approval Stakeholders

5.3.1 Stakeholder Matrix

Stakeholder matrix captures distribution of work area, level of responsibility and Service Level Guarantee of various stakeholders within the ULB and/ or contracted organisations based on ward / locality/jurisdiction, service / issue category.

5.3.1.1 Stakeholders

This refers to the types of stakeholders who are involved in a building plan approval system such as the applicant, assessor, inspectors, appellate authority and Municipal Commissioner.

5.3.1.1.1 *Applicant*

An applicant is the person or group of persons who has originated the building plan approval application or building surveyor license application. The applicant can be an architect or professional on record who has applied for the building plan approval on behalf of the owner of the property.

5.3.1.1.2 *Assessor*

An assessor is a ULB official who determines the value of a building permit for revenue purposes. The figures assessors derive are used to calculate future building plan approval fees. The assessor estimates the value of property within a city or town's boundaries. This value (assessed value) is converted into an assessment, which is one component in the computation of BPA bills.

5.3.1.1.3 *Licensed Building Surveyor*

Qualified professionals who have been registered with the Authority as per the Qualification and competence given in Appendix 'E' of Model Building Bye Laws/ by the body governing such profession and possess the license to provide professional services in Building construction.

5.3.1.1.4 *ULB Inspector*

A ULB Inspector is a person who has been appointed by a government department or agency to perform BPA compliance and enforcement duties.

5.3.1.1.5 *Appellate Authority*

Appellate Authority is the authority or representative of the authority assigned to review the procedures and decisions or assessment of BPA to make sure that the proceedings were fair and that the proper law/regulation are applied appropriately.

5.3.1.1.6 *Intermediaries*

Intermediary is the individual, group of persons (Volunteers) or organisations (NGOs, Trusts, start-ups etc.) who initiated the BPA request or application on the behalf of the originator who lacks the capacity to use any channels which are provided by the ULB. These Intermediaries should be registered with the authorized body or organisation in order to provide their services to the originator (who is either from marginalized section, illiterate or differently abled) and should not charge extra money from the originator.

The application submitted by the intermediaries for the originator who is capable of filling their own request will not be considered by the authorized body or organisation.

5.3.1.1.7 *Executive Head*

Municipal Commissioner/ Chief Officer/Executive Officer of the ULB or municipal body means an officer appointed by the Government, and includes an Additional Director, a Joint Director, Deputy Director, or any other officer of the Government authorized by it to perform the functions of the Commissioner and Director of Municipal Administration.

5.3.1.1.8 *Architects*

Architects means a person whose name is for the time being entered in the register of Council of Architecture (Council of Architecture, 1972). The architects may be responsible to design the building as per Building Bye Laws or any other building bye laws by the authorized body or organisation.

5.3.1.1.9 Contractors/Builders

Contractors are any person or organisation with whom the ULB has entered into contract in relation with the construction works and/ or O&M requirements.

5.3.1.1.10 Fire Department

The department of State or ULB in-charge of preventing and fighting fires. To obtain building plan approval an NOC from the Fire department is mandatory.

5.3.1.1.11 Other Related Departments and Authorities

Other related departments mean the departments related to building approval activities such as Town & Country Planning, Property Tax department, Airport Authority of India, forest department, archaeology department, pollution control department, Indian Railways, labour department, traffic police department or any other as mentioned and/or defined in state specific building bye laws and/or rules or regulations.

5.3.1.2 Distribution of Work Area

This refers to the ward and/or sectors within ULB for which each of the stakeholders are responsible for.

5.3.1.3 Level of responsibility for redressal

In order to ensure that applications are resolved within the prescribed time norm, escalation levels of responsibility for redressal are mapped.

5.3.1.4 Service Level Guarantee

The maximum time that service departments expect to take to complete the building plan approval process. Also called expected compliance time set by the ULB in citizen charter or any public disclosed document for a service in which it should be issued or managed. Public sharing of a comparative picture of various SLGs in the ULB may introduce competition to improve performance.

5.4 Building Plan Approval Processes

Building Plan Approval Processes are a series of actions or steps taken in order to achieve a timely delivery of building permission certificates/ building surveyor license by the authorized body or organisation such as BPA application creation, assessment, suspension, restoration, cancellation, appellate, billing, approval, and sanctions. These are defined below.

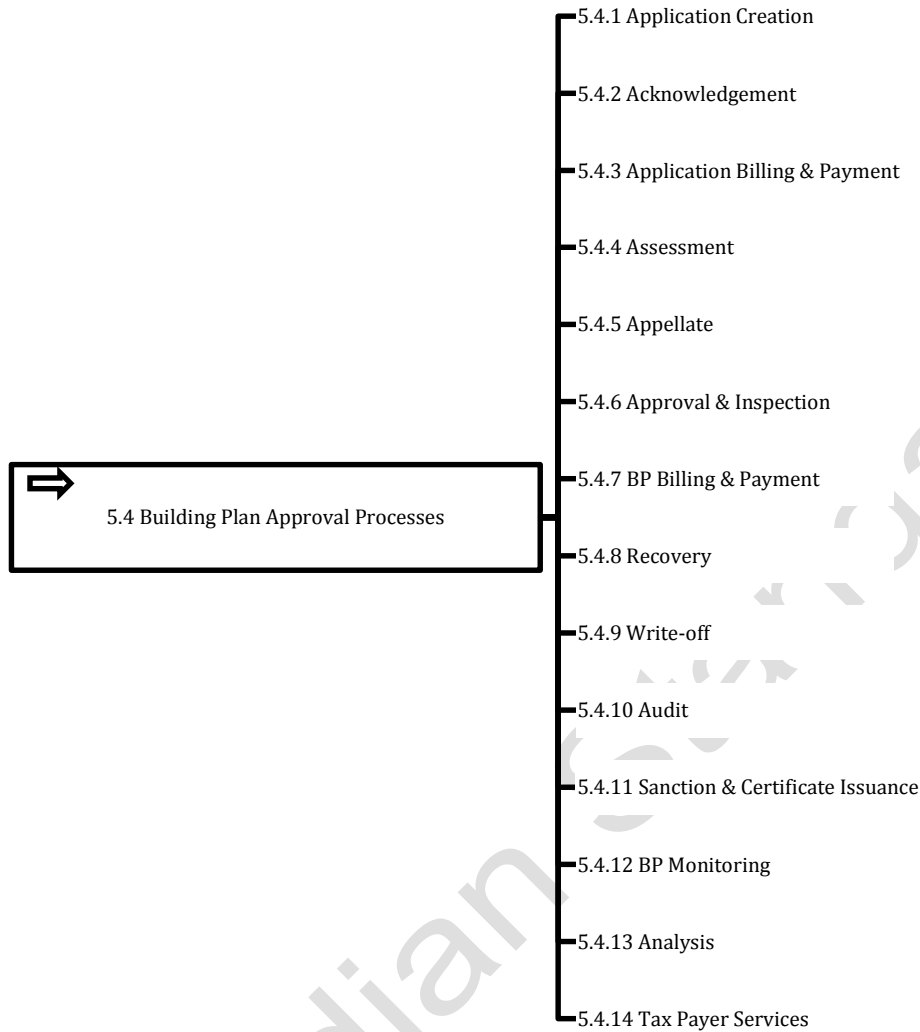


Fig. 19 Taxonomy for Building Plan Approval Processes

5.4.1 Application Creation

A process by which an application is created for BPC and/or BSL at the ULB such as a new building permission certificate, renewal of building permission certificate, new building surveyor license, or renewal of building surveyor license. Application status, in this case, is new.

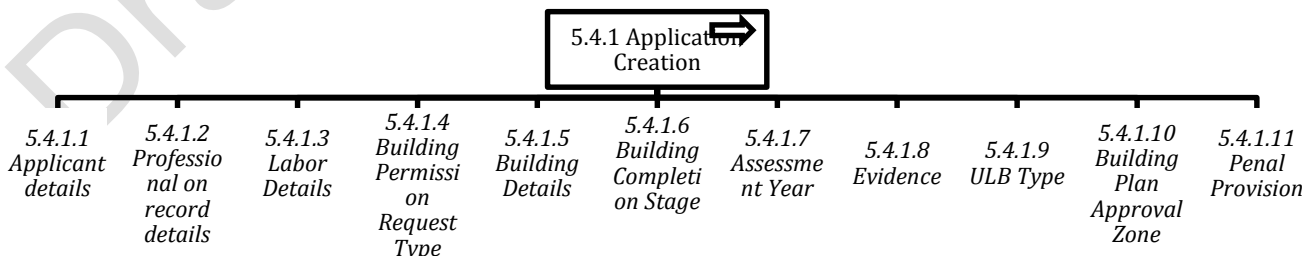


Fig. 20 Taxonomy for Application Creation Process

5.4.1.1 Applicant details

See Clause 5.1.5

5.4.1.2 Professional on record details

See Clause 5.1.6

5.4.1.3 Labor Details

See Clause 5.1.7

5.4.1.4 Building Permission Request Type

See Clause 5.1.19

5.4.1.5 Building Details

See Clause 5.1.8

5.4.1.6 Building Completion Stage

See Clause 5.1.10

5.4.1.7 Assessment Year

See Clause 5.1.20

5.4.1.8 Evidence

See Clause 5.1.3

5.4.1.9 ULB Type

See Clause 5.1.14

5.4.1.10 Building Plan Approval Zone

See Clause 5.1.12

5.4.1.11 Penal Provision

See Clause 5.1.15

5.4.2 Acknowledgement

The process to acknowledge the new registration/renewal by the authorized body or organisation. An acknowledgement slip or receipt is generated post acknowledgement of the application. An application ID is generated in this case. Acknowledgement may be automatic or manual (if the Building permission request is received through a non-digital channel). Application status post acknowledgement is changed to acknowledged.

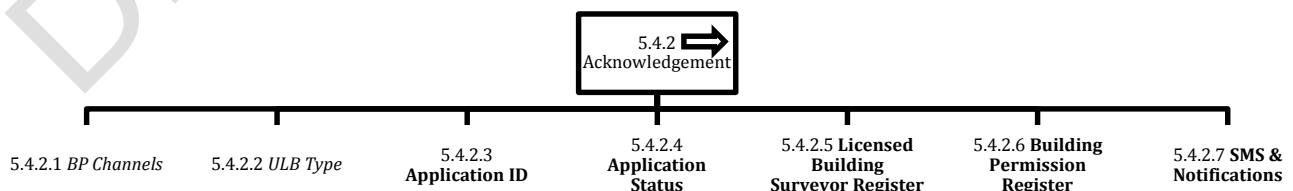


Fig. 21 Taxonomy for Acknowledgement Process

5.4.2.1 *BP Channels*

See Clause 5.2

5.4.2.2 *ULB Type*

See Clause 5.1.14

5.4.2.3 *Application ID*

See Clause 5.1.4

5.4.2.4 *Application Status*

See Clause 5.1.18

5.4.2.5 *Licensed Building Surveyor Register*

See Clause 5.5.12

5.4.2.6 *Building Permission Register*

See Clause 5.5.11

5.4.2.7 *SMS & Notifications*

These are the notifications sent to citizens informing them about the BPA application being registered on the system.

5.4.3 *Application Billing & Payment*

Application Billing & Payment is the process of generating a bill (demand) against a new application by the ULB and subsequent payment of the same by the applicant.

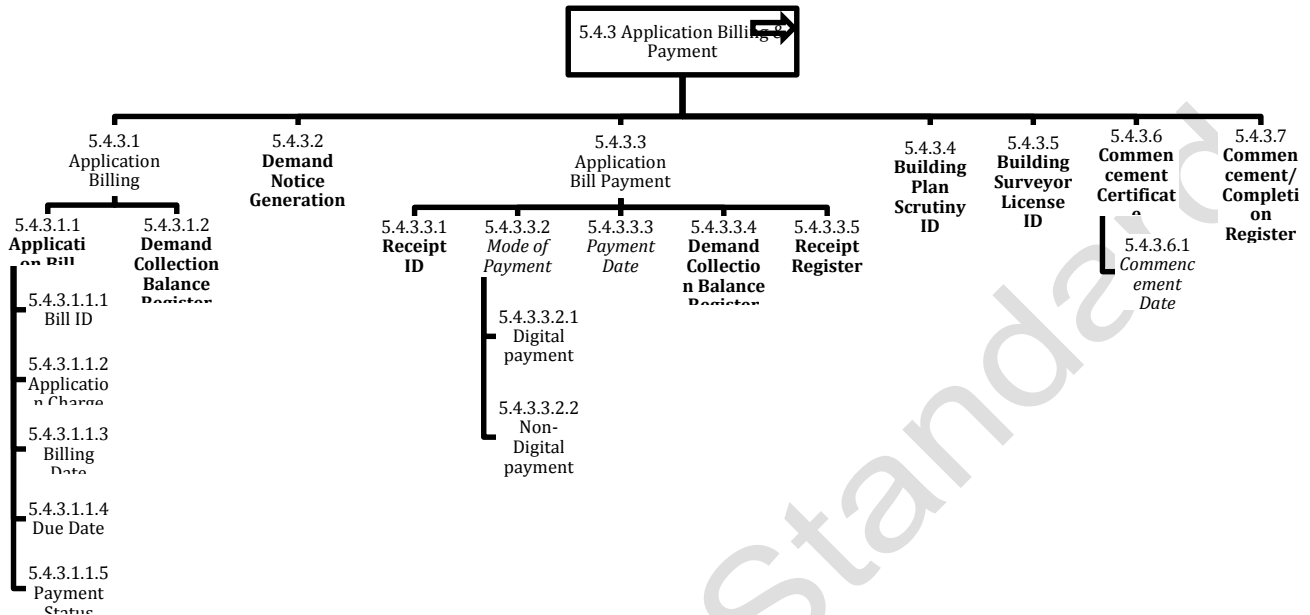


Fig. 22 Taxonomy for Application Billing and Payment Process

5.4.3.1 Application Billing

The process by which an application bill is generated during the process of a new application.

5.4.3.1.1 Application Bill

It is the initial bill generated for the application/inspection fee for the applied NOC. Inspection bill consists of application processing fee and inspection fee amount.

5.4.3.1.1.1. Bill ID

See Clause 5.1.21.1.1

5.4.3.1.1.2. Application Charge

See Clause 5.1.21.1.2

5.4.3.1.1.3. Billing Date

See Clause 5.1.24.2.10

5.4.3.1.1.4. Due Date

See Clause 5.1.21.1.4

5.4.3.1.1.5. *Payment Status*

See Clause 5.1.21.1.5

5.4.3.1.2 *Demand Collection Balance Register*

See Clause 5.5.1.7

5.4.3.2 *Demand Notice Generation*

This is the process in which bill (demand) is generated and served to the applicant

5.4.3.3 *Application Bill Payment*

Channel / Mode / Method through which building plan approval/ building surveyor license application is being registered by the citizen or information and response is shared by the authorized body or organisation.

5.4.3.3.1 *Receipt ID*

See Clause 5.1.22.1

5.4.3.3.2 *Mode of Payment*

It means mode of payment of bill amount by the applicant.

5.4.3.3.2.1. *Digital payment*

A digital payment occurs when the payment for processing the application and BPA fees could be done via digital and electronic medium, such as using debit card, credit card, payment gateway etc.

5.4.3.3.2.2. *Non-Digital payment*

Non-digital payment refers to the mode of payment of money in physical form like cash, demand draft, cheque etc.

5.4.3.3.3 *Payment Date*

See Clause 5.1.22.2

5.4.3.3.4 *Demand Collection Balance Register*

See Clause 5.5.1.7

5.4.3.3.5 *Receipt Register*

See Clause 5.5.1.8

5.4.3.4 *Building Plan Scrutiny ID*

Building Plan Scrutiny ID is the unique identification number generated post payment of application fee by the applicant. BP Scrutiny ID may be used to check the status of a certificate based on the scrutiny and/or assessment by the ULB.

5.4.3.5 *Building Surveyor License ID*

See Clause 5.1.3

5.4.3.6 *Commencement Certificate*

Commencement certificate is the certificate issued by the ULB which permits the applicant to start the commencement of construction work at the site.

The owner, within the validity period of the building plan sanction given, shall start the construction work at the site for which building permit has been granted under the supervision of the Architect / Engineer as per the competence.

5.4.3.6.1 Commencement Date

See Clause 5.1.24.2.3

5.4.3.7 Commencement/ Completion Register

See Clause 5.5.1.4

5.4.4 Assessment

The process by which the documents were scrutinized by the ULB department with the support of other related departments. The assessment is conducted online or offline by the officers assigned based on the location/area. Application status in this case is assigned.

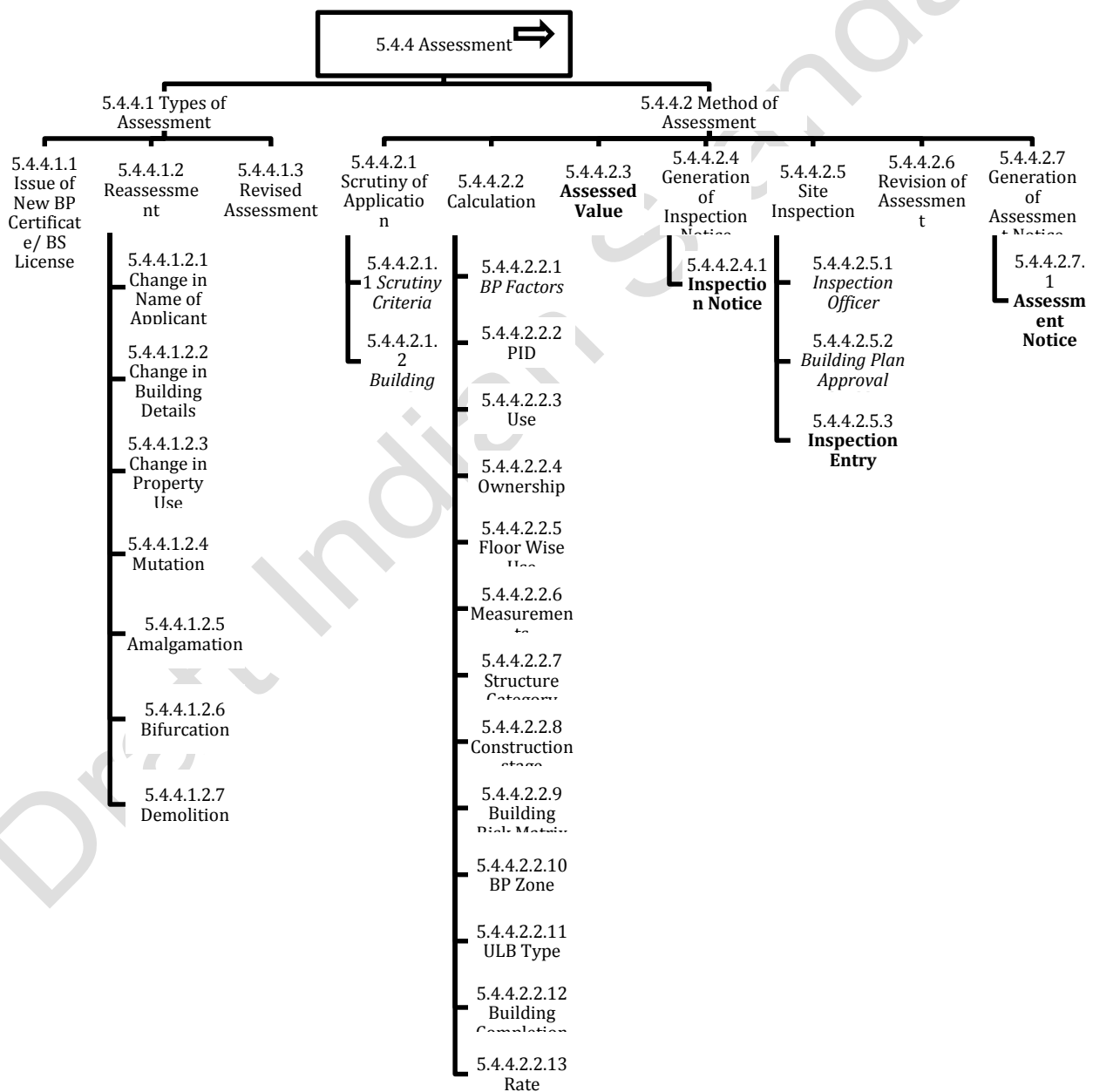


Fig. 23 Taxonomy for Assessment Process

5.4.4.1 Types of Assessment

Types of assessment is the classification of assessment processes undertaken to provide BPA service.

5.4.4.1.1 Issue of New BP Certificate/ BS License

The process undertaken to issue a certificate and/or license for the first time with respect to building plan approvals

5.4.4.1.2 Reassessment

Assessment process undertaken to determine new fee based on the change in the usage of an existing building details.

5.4.4.1.2.1. Change in Name of Applicant

Assessment process undertaken during change in name of applicant.

5.4.4.1.2.2. Change in Building Details

Assessment process undertaken during change in building details which is mentioned in the BP Certificate.

5.4.4.1.2.3. Change in Property Use

Assessment process undertaken during change in property use which is mentioned in the BP Certificate.

5.4.4.1.2.4. Mutation

Assessment process undertaken during transfer of BP Certificate from one owner to another owner.

5.4.4.1.2.5. Amalgamation

Assessment process undertaken when two or more BP Certificates are merged into a single Certificate with a Single or Joint owner.

5.4.4.1.2.6. Bifurcation

Assessment process undertaken when a BP Certificate is bifurcated into two or more Certificates.

5.4.4.1.2.7. Demolition

Assessment process undertaken in case of demolition of a building post issuance of show cause notice by the ULB.

5.4.4.1.3 Revised Assessment

Assessment process undertaken during changing the assessed value for a BPA based on the periodic increase in rates (based on Local acts) or based on noticed changes in the BPA factors. Revised assessment may also take place after appellate decision to change the BPA fees amount.

5.4.4.2 Method of Assessment

This means different methods undertaken to assess the BPA application based on BP factors.

5.4.4.2.1 Scrutiny Application

It is the assessment conducted on the application as soon as it is been applied by the citizen and the scrutiny is conducted by the assessing officer. During the initial assessment scrutiny of documents

may be done by the ULB officials and appropriate inspection fees, BPC fees and inspection notice are generated.

5.4.4.2.1.1. Scrutiny Criteria

See Clause 5.1.9

5.4.4.2.1.2. Building Completion Stage

See Clause 5.1.10

5.4.4.2.2. Calculation

Calculation is the process of calculating the fees for applied BPA based on the specified criteria as mentioned in the State Municipal Acts or as decided by the Municipal Commissioner. BPA calculation process comprises the use of any one or combination of methods using various attributes of BPA such as building details, construction stages, BPA zone and any other related amount to calculate BPA bill amount.

5.4.4.2.2.1. BP Factors

These are the factors associated with a BPA and used in various BPA processes like assessment, calculation and billing.

5.4.4.2.2.1.1. Property ID

See Clause 5.1.8.1

5.4.4.2.2.1.2. Use

See Clause 5.1.8.3

5.4.4.2.2.1.3. Ownership

See Clause 5.1.8.2

5.4.4.2.2.1.4. Floor Wise Use

See Clause 5.1.8.4

5.4.4.2.2.1.5. Measurements

See Clause 5.1.8.8

5.4.4.2.2.1.6. Structure Category

See Clause 5.1.8.13

5.4.4.2.2.1.7. Construction stage

See Clause 5.1.8.14

5.4.4.2.2.1.8. Building Risk Matrix

See Clause 5.1.8.16

5.4.4.2.2.1.9. Building Plan Approval Zone

See Clause 5.1.12

5.4.4.2.2.1.10. ULB Type

See Clause 5.1.14

5.4.4.2.2.1.11. Building Completion Stage

See Clause 5.1.10

5.4.4.2.2.1.12. Rate

Rate is the per unit charge determined for the building construction. It is one of the factors that determine the BPA bill.

5.4.4.2.3 *Assessed Value*

For the purpose of BPA fee, a building is assessed over its location, type, height, design, Floor Area Ratio (FAR) etc. This ascertained price is known as assessed value. Assessed value is converted to BPA fee (demand) once inspection is completed and BP factors are verified. This may include inspection fee value.

5.4.4.2.4 *Generation of Inspection Notice*

This is the process in which Inspection notice is generated and shared with the applicant.

5.4.4.2.4.1. Inspection Notice

Inspection notice is the notice served to the applicant notifying them about the planned time of inspection-by-inspection officer.

5.4.4.2.5 *Site Inspection*

It is the ground inspection conducted post scrutiny of application, an ULB Inspector is assigned to verify the application details viz-a-viz building details with respect to conformance to inspection checklist.

5.4.4.2.5.1. Inspection Officer

Inspection officer is the ULB or any other service provider (state government, utility board, parastatals) officially assigned to inspect property with respect to conformance to the inspection checklist

5.4.4.2.5.2. Building Plan Approval Checklist

See Clause 5.1.23

5.4.4.2.5.3. Inspection Entry

It means reporting the details of inspection post ground inspection by the inspector such as inspection time, details, notes etc. Application status in this case is inspected or rejected.

5.4.4.2.6 *Revision of Assessment*

Revised assessment notice is the notice served to the applicant indicating the revised usage value of BPA assessed on the basis of the actual ground inspection. Thereafter a revised assessment notice is shared with the applicant.

5.4.4.2.7 *Generation of Assessment Notice*

This is the process in which assessment notice is generated and shared with applicants.

5.4.4.2.7.1. Assessment Notice

Assessment notice is the notice served to the citizen indicating the application charge value of BPC post inspection of property. This notice is not considered as the final bill. The assessment notice is the interim notice to confirm the charges of the BPA.

5.4.5 Appellate

Appellate is the process followed after the assessment is presented and the applicant is aggrieved by the fixation or the charging of the BPA fees. The appeal process is initiated with a simple appeal letter or through BPA application.

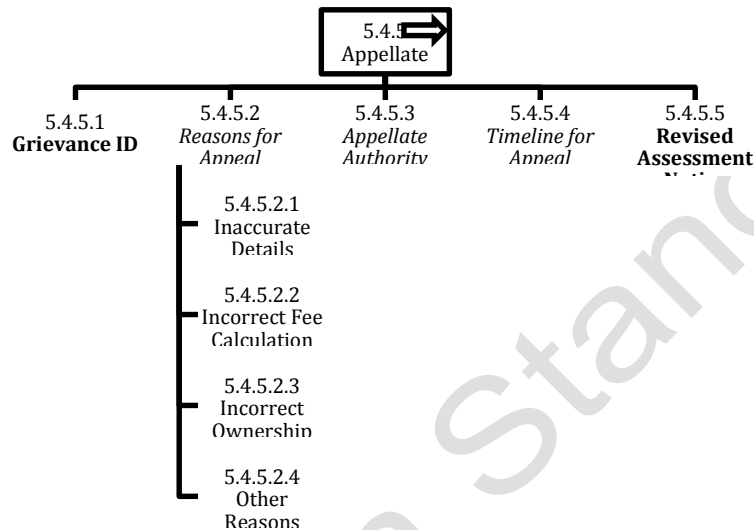


Fig. 24 Taxonomy For Appellate Process

5.4.5.1 Grievance ID

Grievance ID is a unique identification number allotted to the grievance by the ULB for the purpose of grievance recording, allocation, assessment, follow up, and appeal.

5.4.5.2 Reasons for Appeal

Reason for appeal is the reasons as captured in assessment notice or usage bill because of which an aggrieved person appeals to the appellate authority for necessary redressal.

5.4.5.2.1 Inaccurate Details

This means the aggrieved person has appealed given the reason for inaccurate details such as incorrect name, owner name, incorrect address in an assessment notice.

5.4.5.2.2 Incorrect Fee Calculation

This means the aggrieved person has appealed given the reason for incorrect fee calculation in an assessment notice.

5.4.5.2.3 Incorrect Ownership

This means the aggrieved person has appealed given the reason for incorrect ownership in an assessment notice

5.4.5.2.4 Other Reasons

This means the aggrieved person has appealed given any other reason as per the assessment notice

5.4.5.3 Appellate Authority

See Clause 5.3.1.1.5

5.4.5.4 Timeline for Appeal

See Clause 5.1.24.2.9

5.4.5.5 Revised Assessment Notice

Revised assessment notice is the notice served to the applicant indicating the revised value of BPA assessed on basis of the revised assessment.

5.4.6 Approval & Inspection

The process of approving the applied application for BPA post assessment and inspection of plinth level completion by the officials of the authorized body or organisation. Application status in this case is approved.

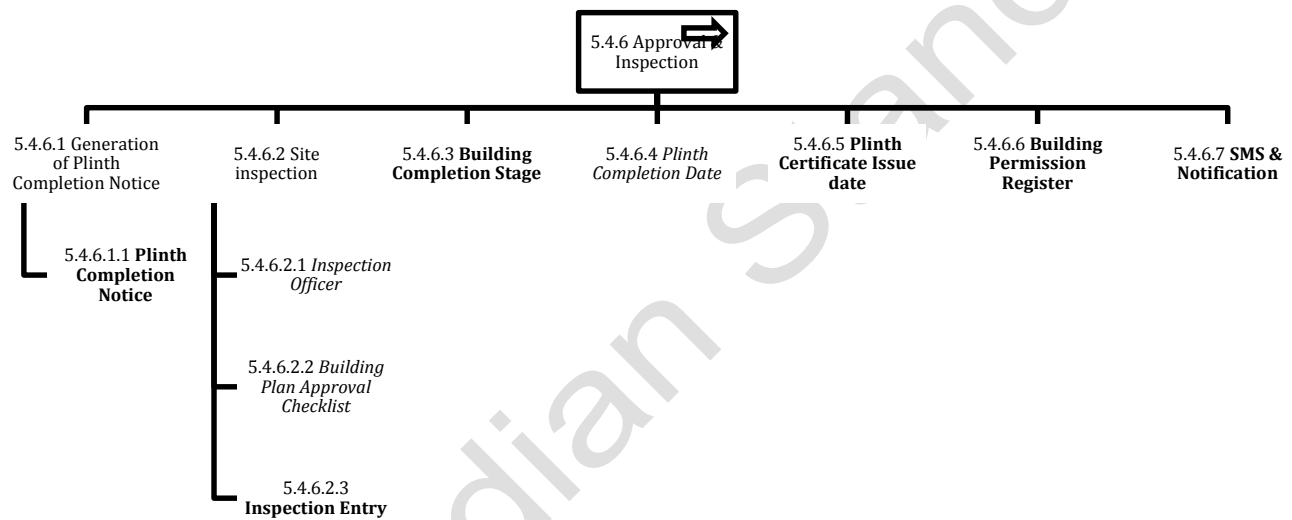


Fig. 25 Taxonomy For Approval and Inspection Process

5.4.6.1 Generation of Plinth Completion Notice

The process of generating a plinth completion certificate by the ULB.

5.4.6.1.1 Plinth Completion Notice

The owner through his engaged competent professional for building plan design shall give notice to the ULB on completion of the work up to plinth level to enable the ULB to ensure that work conforms to the sanctioned building plans and Building Bye-laws.

5.4.6.2 Site inspection

It is the ground inspection conducted post completion of plinth level construction by an ULB Inspector to verify the application details viz-a-viz building details and plans with respect to conformance to the inspection checklist.

5.4.6.2.1 Inspection Officer

See Clause 5.4.4.2.5.1

5.4.6.2.2 Building Plan Approval Checklist

See Clause 5.1.23

5.4.6.2.3 Inspection Entry

See Clause 5.4.4.2.5.3

5.4.6.3 Building Completion Stage

See Clause 5.1.10

5.4.6.4 Plinth Completion Date

See Clause 5.1.24.2.5

5.4.6.5 Plinth Certificate Issue date

See Clause 5.1.24.2.6

5.4.6.6 Building Permission Register

See Clause 5.5.1.1

5.4.6.7 SMS & Notification

See Clause 5.4.2.7

5.4.7 Building Plan Approval Billing & Payment

The process by which a building permit bill is generated based on BP factors post assessment, verification and inspection wrt the application. Application status, in this case, is pending for payment.

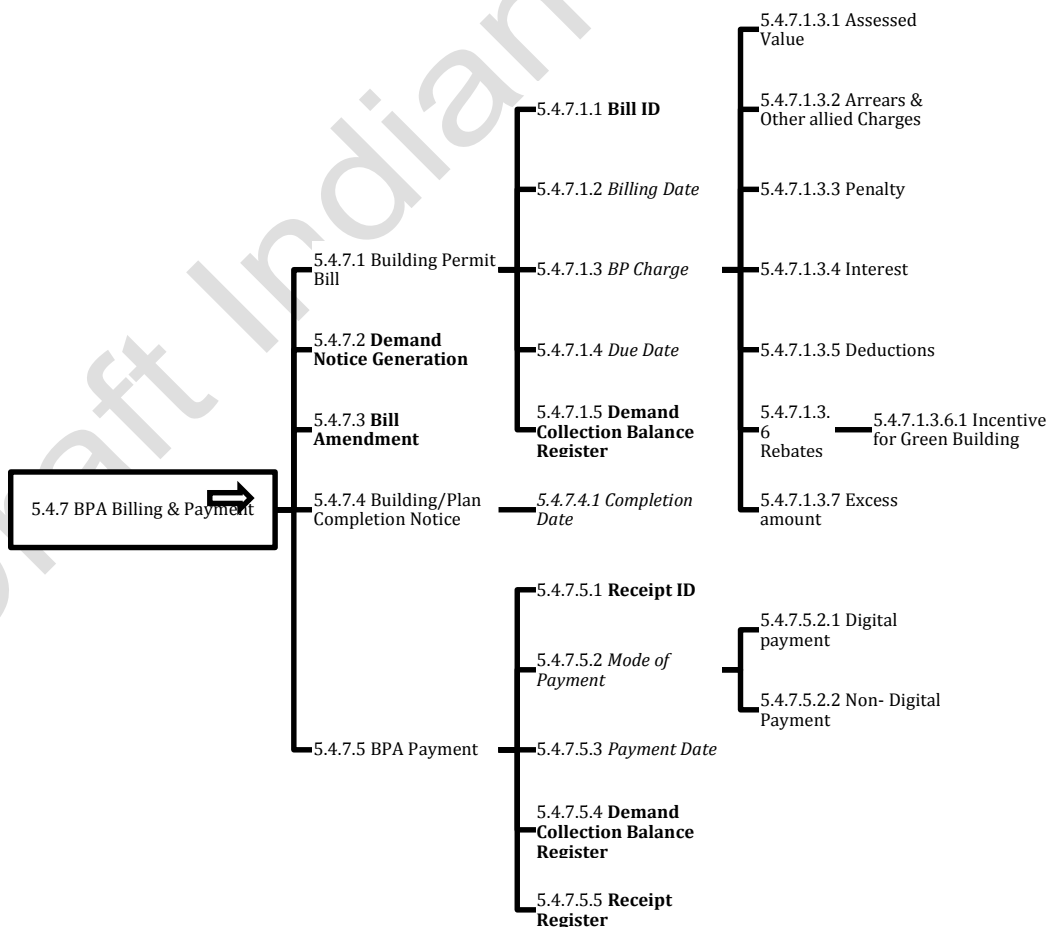


Fig. 26 Taxonomy For Building Plan Approval Billing and Payment Process

5.4.7.1 Building Permit Bill

It means the final bill generated in reference to the BPA application is based on the assessed value for the certificate.

5.4.7.1.1 Bill ID

See Clause 5.1.21.1.1

5.4.7.1.2 Billing Date

See Clause 5.1.24.2.10

5.4.7.1.3 Building Permission Charge

See Clause 5.1.21.2.2

5.4.7.1.3.1 Assessed Value

See Clause 5.4.4.2.3

5.4.7.1.3.2 Arrears & Other allied Charges

Arrears are defined as previous years and/or unpaid bill amount or BPA fees.

5.4.7.1.3.3 Penalty

The amount of extra money the citizen has to pay for failing to adhere to BPA rules and/or/laws, timelines.

5.4.7.1.3.4 Interest

The amount collected above the BP bill in the event of late payment. It is usually determined at a particular rate of BP.

5.4.7.1.3.5 Deductions

Deductions is the component of BP charge which has been deducted from the gross fee in lieu of advance or any other exemptions made subject to the rules of assessment of BPA application.

5.4.7.1.3.6 Rebates

Discount given to the citizen for paying BP bill in advance or before end of the statutory period or for undertaking certain listed activities as per the applicable rules.

5.4.7.1.3.6.1 Incentive for Green Building

Incentives may be included as part of rebate systems in authorized body or organisation, with respect to Green Building Norms as per State/UTs rules, regulations or prevailing acts. Incentives can be provided in terms of allocation of additional FAR, exemption/subsidy in BP fees or on monetary basis to the extend by any law or regulation, the developer shall comply with same. If the state/ULB need to encourage sustainable/green building norms over and above the mandates the same can be provided an incentive in an appropriate form.

5.4.7.1.3.7 Excess amount

This means any other amount that may be added in the bill as per assessment, rule or law.

5.4.7.1.4 Due Date

See Clause 5.1.21.1.4

5.4.7.1.5 Demand Collection Balance Register

See Clause 5.5.1.7

5.4.7.2 Demand Notice Generation

See Clause 5.4.3.2

5.4.7.3 Bill Amendment

Bill amendment is the process of amending a connection user bill when applicant notices a discrepancy in the calculation of the bill and submits a request for amendment or when the ULB realizes a discrepancy in the calculation of bill and amends it. There can be following reasons for bill amendments,

- a) Court Case Settlement
- b) Arrear Write-off
- c) DCB Correction
- d) One Time Settlement

5.4.7.4 Building/Plan Completion Notice

Every Owner shall submit a notice of completion of the building to the ULB regarding the completion of the work described in the building permit. The notice of completion shall be submitted by the Owner through the engaged Competent Professional for building plan design as the case may be who has supervised the construction, accompanied by three copies of the completion plan (as in the case of the sanctioned plan including one cloth mounted copy) and the documents as prescribed in State specific Building bye-laws/rules and/or regulations along with the prescribed fee.

5.4.7.4.1 Completion Date

See Clause 5.1.24.2.7

5.4.7.5 Building Plan Approval Payment

Building Plan Approval Payment is the voluntary tender of money or its equivalent paid by the applicant against the bill generated for building permit or Occupancy certificate.

5.4.7.5.1 Receipt ID

See Clause 5.1.22.1

5.4.7.5.2 Mode of Payment

See Clause 5.4.3.3.2

5.4.7.5.2.1 Digital payment

See Clause 5.4.3.3.2.1

5.4.7.5.2.2 Non- Digital Payment

See Clause 5.4.3.3.2.2

5.4.7.5.3 Payment Date

See Clause 5.4.22.2

5.4.7.5.4 *Demand Collection Balance Register*

See Clause 5.5.1.7

5.4.7.5.5 *Receipt Register*

See Clause 5.5.1.8

5.4.8 *Recovery*

Recovery means, recovery of fees from the applicant or defaulters. In some cases, recovery may be in terms of impounding any movable or immovable asset of the defaulter. Few methods of recovery in BPA are:

- a) by presenting a bill
- b) by serving a written notice of demand
- c) by a suit

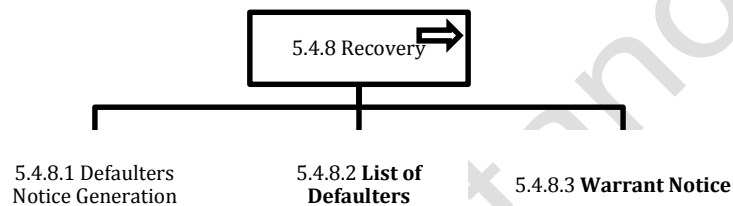


Fig. 27 Taxonomy For Recovery

5.4.8.1 *Defaulters Notice Generation*

This means the generation and service of notice to the defaulters who have not paid the BP bill by the due date. In these cases, bills are amended to include penalties or late fee for defaulting.

5.4.8.2 *List of Defaulters*

See Clause 5.5.1.3

5.4.8.3 *Warrant Notice*

Warrant notice is the bill that is served by the authority on the service seeker for recovery

5.4.9 *Write off*

Write-Off of BPA fee is the process of deductions or exemptions of fee, in compliance with any law, or through the guidelines of the ULB or the court of law.

5.4.10 *Audit*

An audit is a systematic and independent examination of a building and building plan approval process or activity to determine whether it is being carried out in accordance with established standards, procedures, and guidelines. In this context, a financial audit for building plan approval process and a structural audit of the buildings may be conducted to a review or evaluate the building plan and its accompanying documentation by a qualified professional.

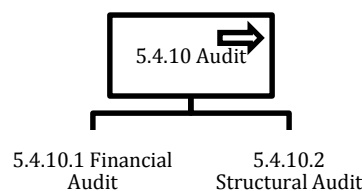


Fig. 28 Taxonomy For Audit Process

5.4.10.1 Financial Audit

Financial audit of the building plan approval bill is a process by which the correctness of the fees levied or recovered is assessed. The local authority may conduct a financial audit to ensure that the fees and charges have been correctly calculated and paid. This financial audit is carried out by the local authority's finance department or an independent auditor.

5.4.10.2 Structural Audit

The municipal corporations have mandated a structural audit requirement for buildings post issuance of occupancy certificate. The date of Occupancy certificate is considered as start date and post 20 yrs. of occupation the resident is required to get the structure inspected by qualified structural engineer. The remedial measures are to be carried out and a report by structural engineer post such repairs is required to be submitted to approving authority. **See Clause 5.1.9.1 Building Plans ((d) Structural Plans); See Clause 5.4.12.10.**

5.4.11 Sanction & Certificate Issuance

The process of sanctioning and issuing building permission certificates for the applied application for BPA post assessment and inspection of building construction completion by the officials of the authorized body or organisation.

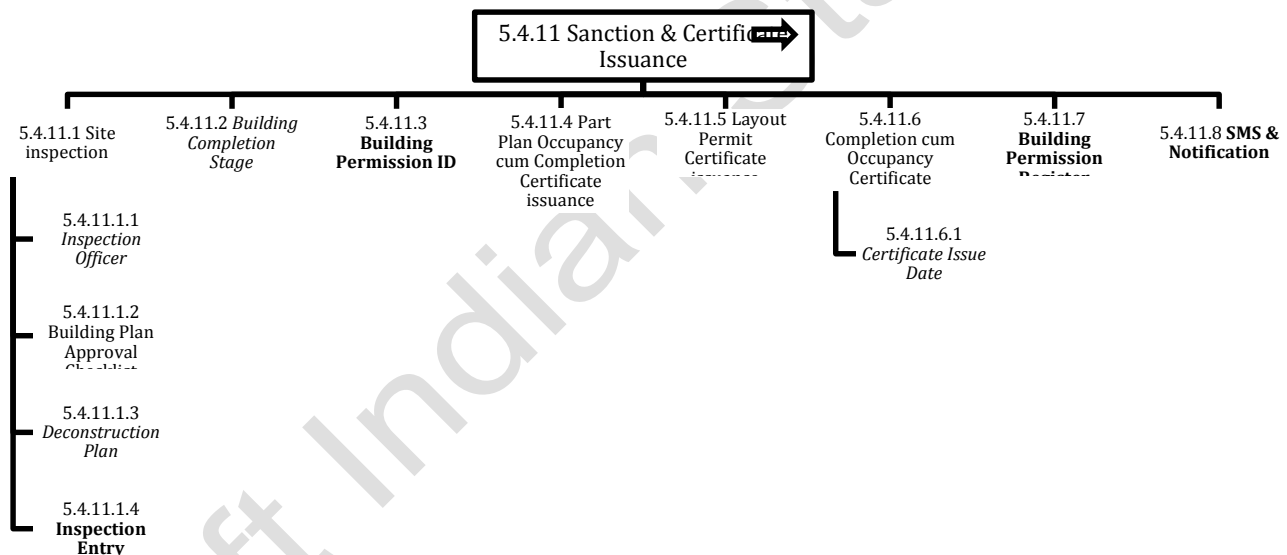


Fig. 29 Taxonomy For Sanction and Certificate Issuance Process

5.4.11.1 Site inspection

It is the ground inspection conducted post completion of construction at site by an ULB Inspector to verify the application details viz-a-viz building details and plans with respect to conformance to the inspection checklist.

5.4.11.1.1 Inspection Officer

See Clause 5.4.4.2.5.1

5.4.11.1.2 Building Plan Approval Checklist

See Clause 5.1.23

5.4.11.1.3 Deconstruction Plan

See Clause 5.1.8.17

5.4.11.1.4 Inspection Entry

See Clause 5.4.4.2.5.3

5.4.11.2 Building Completion Stage

See Clause 5.1.10

5.4.11.3 Building Permission ID

See Clause 5.1.1

5.4.11.4 Part Plan Occupancy cum Completion Certificate issuance

Part Plan Occupancy cum Completion Certificate issuance means the issuance of a part plan certificate in case any structure meets the minimum requirement of habitation. However, the issue of part OCC will not affect the validity of the building permit. After the expiry of the validity period, the building permit will have to be revalidated irrespective of whether part OCC has been issued or not.

5.4.11.5 Layout Permit Certificate issuance

This means the issuance of a layout plan sanctioning certificate post inspection and payment of appropriate fees.

5.4.11.6 Completion cum Occupancy Certificate Issuance

This means the issuance of completion cum occupancy certificate post assessment, inspection and payment of related fees and charges.

5.4.11.6.1 Occupancy cum Completion Certificate Date

See Clause 5.1.24.2.8

5.4.11.7 Building Permission Register

See Clause 5.5.1.1

5.4.11.8 SMS & Notification

See Clause 5.4.2.7

5.4.12 Building Plan Approval Monitoring

BP monitoring is the monitoring process undertaken by ULB officials from the time a BP application is lodged on the system until it's approved and remains valid. The certificates/licenses and associated revenue are monitored based on the purpose of BPA, Service Level Benchmarks, building type, regulation purpose and need for renewal etc.

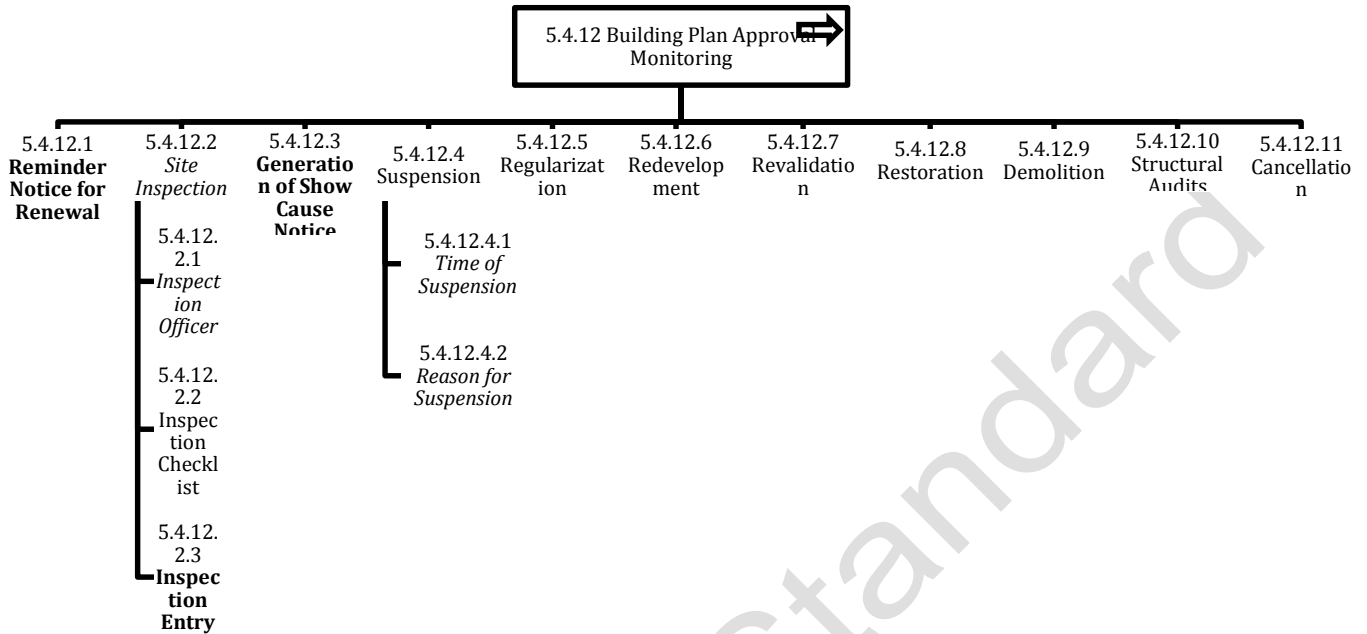


Fig. 30 Taxonomy for Building Plan Approval Monitoring

5.4.12.1 *Reminder Notice for Renewal*

The process of issuing a notice for renewal by the authorized body or organisation to the applicant for renewal of an expired certificate/license. The notice may be issued via SMS, Email, or by sending physical letter to the owner of the certificate/license.

5.4.12.2 *Site Inspection*

Site Inspection is the process by the ULB officials to check that the building is carrying out activities as per the sanctioned plans and is adhering to the relevant rules and/or guidelines. This form of inspection may occur whenever the ULB is found suitable. Show Cause Notice can be issued to the applicant if they violate the rules or if a complaint is raised against them.

5.4.12.2.1 *Inspection Officer*

See Clause 5.4.4.2.5.1

5.4.12.2.2 *Inspection Checklist*

See Clause 5.1.23.4

5.4.12.2.3 *Inspection Entry*

See Clause 5.4.4.2.5.3

5.4.12.3 *Generation of Show Cause Notice*

The process of issuing a show causes notice to building permission certificates/building surveyor license owners who have offended any rule and/or regulations as per the ULB. The notice is served

to give an opportunity to defend the charges made against the certificate/license owner by explanations and reasons in writing and/or by personal hearing. If the offender justified the charges/actions then the charges will be dropped. Certificates/licenses of owners who fail to justify the charges will be suspended by the ULB

5.4.12.4 *Suspension*

The process by which a valid BP certificate/ BSL is suspended by the ULB by giving a reason for suspension.

5.4.12.4.1 *Time of Suspension*

This means recording of the time at which the certificate/license has been suspended by the ULB.

5.4.12.4.2 *Reason for Suspension*

This means recording the reason for which the certificate/license has been suspended by the ULB.

5.4.12.5 *Regularization*

The process undertaken to regularize an area/building. **See Clause 5.1.19.5**

5.4.12.6 *Redevelopment*

The process undertaken for sanction of redevelopment of the building. **See Clause 5.1.19.4**

5.4.12.7 *Revalidation*

The process undertaken for revalidating the already sanctioned plan as per the validity. **See Clause 5.1.19.7**

5.4.12.8 *Restoration*

The process by which the applicant may restore a previously expired building permission certificate/building surveyor license. **See Clause 5.1.19.12**

5.4.12.9 *Demolition*

The process of demolition undertaken by the ULB in case the building is erected/alterd or in construction work is commenced in contradiction to the rules, regulations, building bye-laws and/or master plans. The ULB or any other organisation or person shall be competent to require the building to be altered or demolished, by a written notice delivered to the owner. Such notice shall also specify the period during which such alteration or demolition has to be completed and if the notice is not complied with, the ULB or any other person authorized by them may demolish the said building at the expense of the owner. **See Clause 5.4.4.1.2.7.**

5.4.12.10 *Structural Audits*

A Structural audit is required for buildings as per the age of the buildings defined under State laws/regulations/acts/building byelaws or National Building Code 2016 or for buildings which have undergone significant alterations or additions or have experienced damage due to natural calamities. The structural audit must be carried out by a qualified structural engineer or a team of engineers, who must be registered with the relevant authority.

The structural audit process involves a detailed assessment of the building's structural integrity, including the foundation, walls, floors, roof, and other structural components. The engineer evaluates the building's ability to withstand external forces such as wind, earthquakes, and other natural

disasters. Based on the findings of the audit, the engineer will provide a report with recommendations for any necessary modifications or changes to the building's design or construction.

As part of the building plan approval process, the structural audit report must be submitted along with the building plan application

5.4.12.11 Cancellation

The process of cancelling the certificate/license for the owners. The cancellation of BPC/BSL is issued when there is no satisfactory response received from the owner for which show cause notice was issued. The penalty may be imposed in such cases. **See Clause 5.1.19.9.**

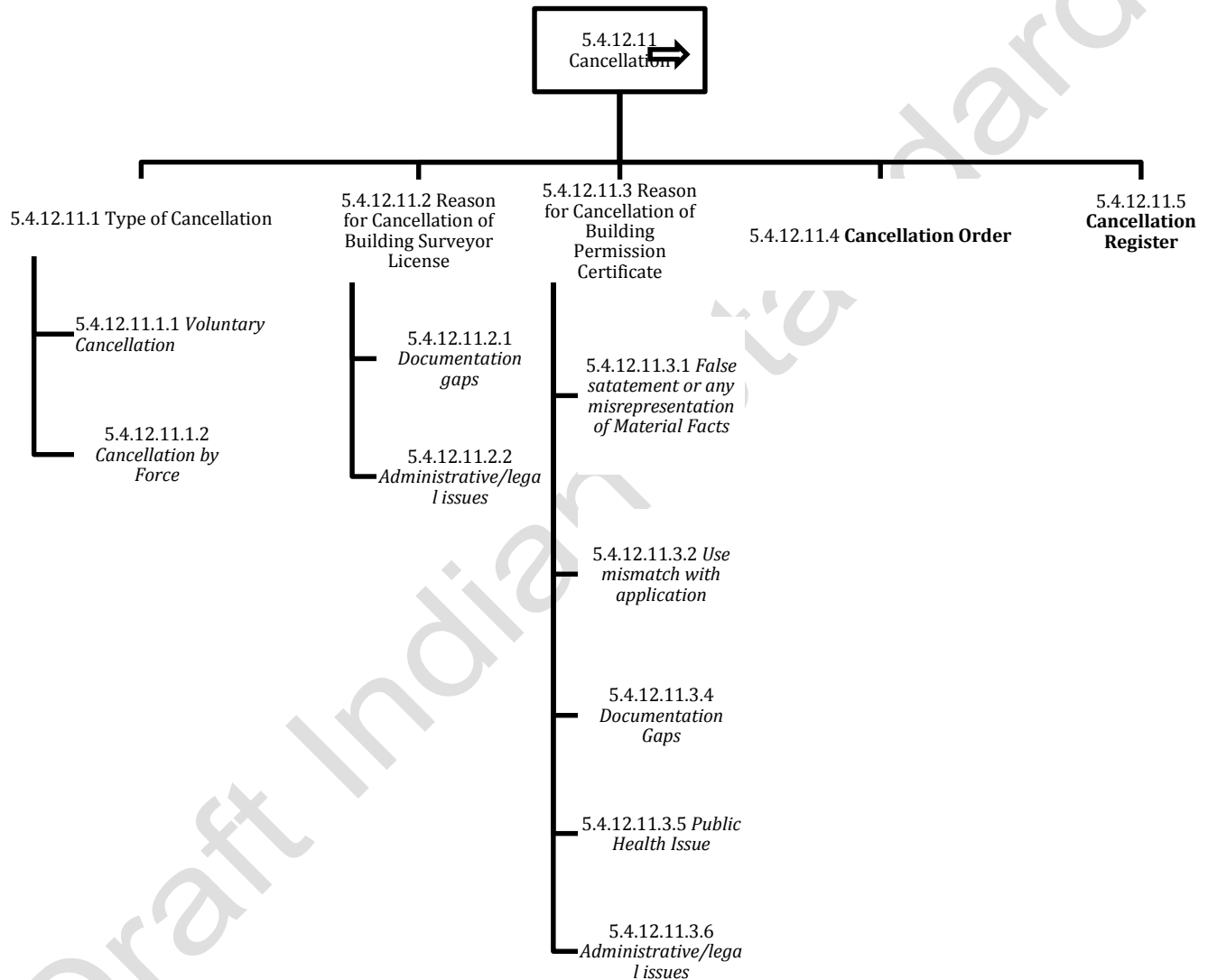


Fig. 31 Taxonomy for Cancellation Process

5.4.12.11.1 Type of Cancellation

Type of cancellation captures classification of BP cancellation such as voluntary cancellation or cancellation by force.

5.4.12.11.1.1 Voluntary Cancellation

This means cancellation of application by the applicant.

5.4.12.11.1.2. Cancellation by Force

This means cancellation of application or OCCC/BSL by force by giving reasons for cancellation such as safety issues, legal issues, documentation gaps or any other reason.

5.4.12.11.2 Reason for Cancellation of Building Surveyor License

Authorized body or organisation may cancel the building surveyor license application by providing relevant reasons, if the applicant didn't respond to show cause notice on time.

5.4.12.11.2.1. Documentation gaps

ULB may cancel the application if there are any documentation gaps in the application submitted post show cause notice.

5.4.12.11.2.2. Administrative/legal issues

ULB may cancel the application if there are any administrative/legal issues.

5.4.12.11.3 Reason for Cancellation of Building Permission Certificate

Authorized body or organisation may cancel the Building Plan approval application by providing relevant reasons, if the applicant didn't respond to show cause notice on time.

5.4.12.11.3.1. False Statement or Any Misrepresentation of Material Facts

ULB may cancel the application if there are any false statements with respect to building plans, area statement or building details.

5.4.12.11.3.2. Use mismatch with application

ULB may cancel the application if there are any mismatches with respect to use of the building, property or floor as defined in the application.

5.4.12.11.3.3. Documentation gaps

See Clause 5.4.12.11.2.1.

5.4.12.11.3.4. Public Health Issues

ULB may cancel the application if the assessing officer or inspection officer reported any public health issue.

5.4.12.11.3.5. Administrative/legal issues

See Clause 5.4.12.11.2.2.

5.4.12.11.4 Cancellation Order

A cancellation order is generated post cancellation of the application or OCCC/BSL.

5.4.12.11.5 Cancellation Register

See Clause 5.5.1.9

5.4.13 Analysis

BPA analysis is the process through which all BPA applications are analysed to check quality of service and become aware of (and eventually rectify) any deficiency in services. This helps in improving the efficiency, accountability, responsiveness and transparency of a ULB, ultimately leading to improvement in service delivery.

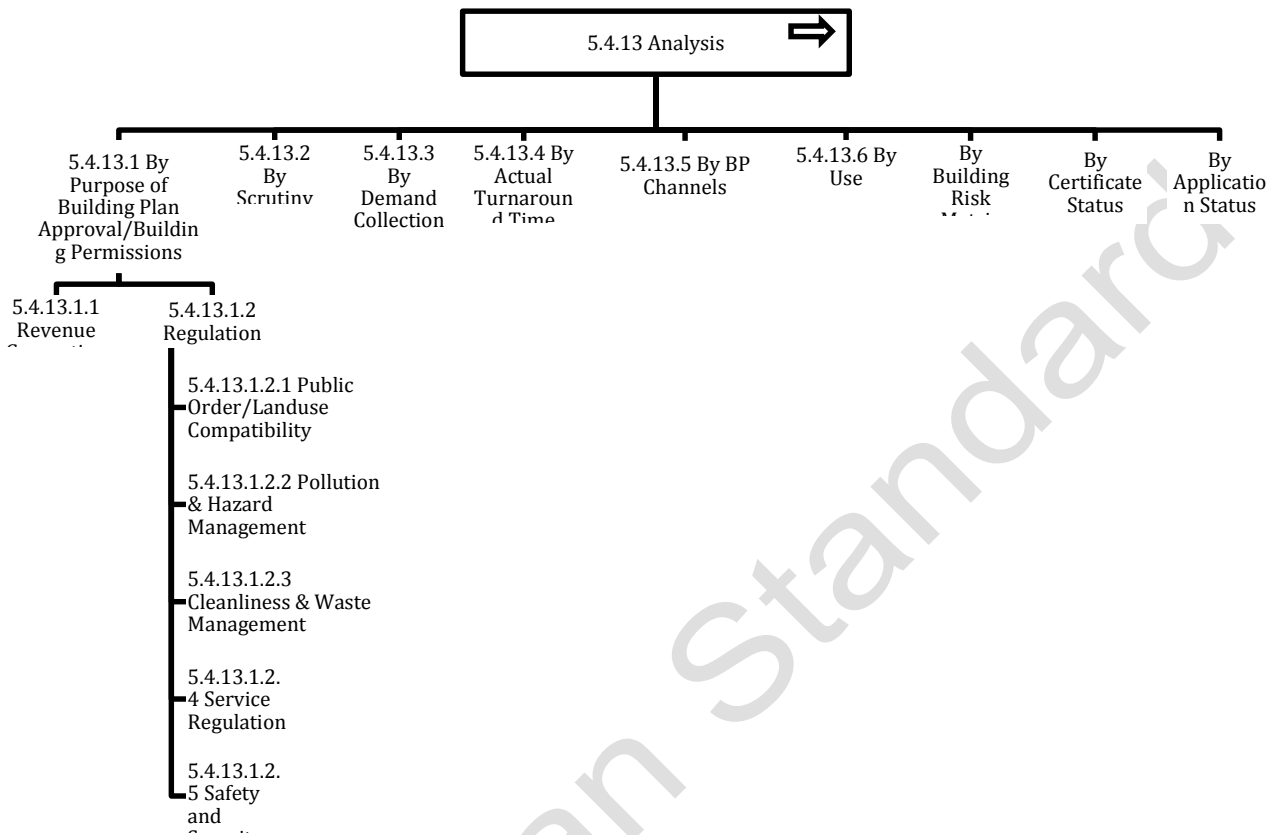


Fig. 32 Taxonomy for Analysis

5.4.13.1 By Purpose of Building Plan Approval/ Building Permissions

This means analysis of BPA application based on the aim or intention of issuing OCCC/BSL by the authorized body or organisation for e.g., revenue generation and regulation.

5.4.13.1.1 Revenue Generation

Authorized body or organisation generate revenue through various sources such as building plan/license approval fees, rent from shops/markets/commercial establishments, water charges, parking fee, UGD charges, cable laying charges etc. to provide timely services and basic infrastructure. BPA is one of the key sources of revenue generation for the ULB.

5.4.13.1.2 Regulation

Regulation is the management of buildings, construction and/or building practices by the authorized body or organisation.

5.4.13.1.2.1. Public order/Land use Compatibility

Regulation and enforcement as per public order and land use defined by the rule of law.

5.4.13.1.2.2. Pollution & Hazard Management

Regulation and enforcement as per the norms, rules and/or regulations defined for construction based pollution, environmental concerns such as water conservation and management, solar energy utilisation, energy efficiency and related hazard management.

5.4.13.1.2.3. Cleanliness & Waste Management

Regulating collection, processing, transportation and disposal of waste such as demolition waste, public convenience facilities and their cleanliness, and other wastes generated during the construction and post-construction. **See Clause 5.1.8.23.**

5.4.13.1.2.4. Service Regulation

Regulations related to service provisions, connection management and other as per the norms, rules, and/or regulations under the state jurisdictions.

5.4.13.1.2.5. Safety and Security

Regulation and management with respect to safety and security provisions such as fire safety provisions, labor safety and security provisions etc. as defined by the state specific rules and/or regulations or as per the rule of law. For tall buildings, measures for safety, industrial buildings safety measures, Safeguards while construction.

5.4.13.2 *By Scrutiny Criteria*

See Clause 5.1.9

5.4.13.3 *By Demand Collection Balance*

See Clause 5.5.1.7

5.4.13.4 *By Actual Turnaround Time*

See Clause 5.1.24.3

5.4.13.5 *By Building Plan Approval Channels*

See Clause 5.2

5.4.13.6 *By Use*

See Clause 5.1.8.3

5.4.13.7 *By Building Risk Matrix*

See Clause 5.1.8.16

5.4.13.8 *By Certificate Status*

See Clause 5.1.17

5.4.13.9 *By Application Status*

See Clause 5.1.18

5.4.14 Taxpayer Services

These are the services available to all taxpayers in a ULB. In the context of BPA there are no due certificates, duplicate bills, LUC, TDR etc.

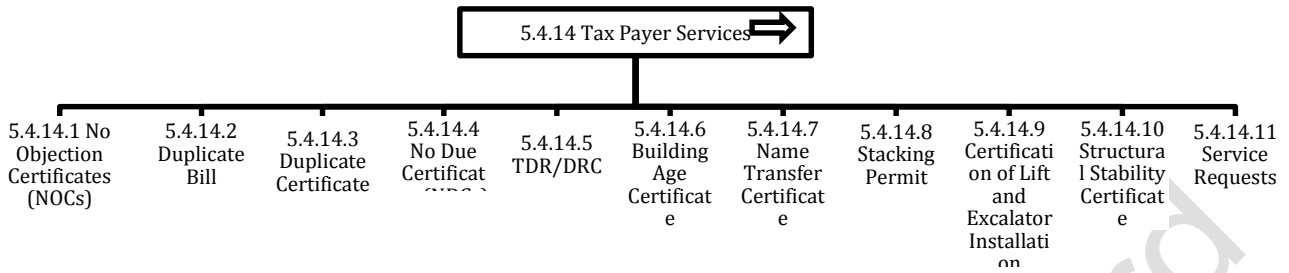


Fig. 33 Taxonomy for Tax Payers Services

5.4.14.1 *No Objection Certificates (NOCs)*

No Objection Certificate (NOC) is a legal document, issued by the ULB or an individual to say that they have no objection to the mentioned details in the document. Following NOCs may be needed for BPA

- a) NOC from Property Tax Department
- b) NOC from Fire Department
- c) NOC from Airport Authority of India
- d) NOC from Archaeological Department/Heritage Conservation Department
- e) NOC from Pollution Control Department
- f) NOC from Labor Department
- g) NOC from Traffic Department
- h) Any others as may be defined by the rule of law

5.4.14.2 *Duplicate Bill*

These are duplicate copies of bill that an applicant can ask for.

5.4.14.3 *Duplicate Certificate*

These are duplicate copies of certificate/license that an applicant can ask for.

5.4.14.4 *No Due Certificates (NDCs)*

No Dues Certificate (NDCs) is a certification provided to the citizen by the ULB confirming and testifying that the asset / property held by them is free from any encumbrances.

5.4.14.5 *Transfer of Development Rights Certificate (TDRC)/ Development Rights Certificate (DRC)*

TDR certificate/ Development Rights Certificate (DRC) is a certificate issued by the competent authority to an owner or a lessee of the land on surrender of the gross 'area' of the land which is required for public purpose. Such 'area' of land must be free of cost and free from all encumbrances. The certificate comprises of the details like FSI/FAR credit in square meters of the built-up area to which the owner or lessee is entitled, the place from where it is generated and the rate of that plot as prescribed in the Annual Statement of Rates issued by the Registration Department or other concerned department for the concerned year (NITI Aayog, 2020).

5.4.14.6 *Building Age Certificate*

Building age certificate means, a certificate that defines the age of the building (chronological age) which may be considered in the calculation of the property tax.

5.4.14.7 *Name Transfer Certificate*

This means the certificate to change the name of the owner from one person to another transferring ownership of the building.

5.4.14.8 *Stacking Permit*

This means a permit issued by the ULB to an owner permitting them to keep building materials on the land of the ULB or on a public street or public place. Owners can apply for a stacking permit based on the usage and quantity of the stacks or as may be defined by the rule of law. An ULB may charge stacking fees as per their rules and/or regulations.

5.4.14.9 *Certification of Lift and Escalator Installation*

The owner of a place intending to erect or install a Lift or Escalator shall apply for this certificate. An additional fee may be charged by the ULB for the requisite certification.

5.4.14.10 *Structural Stability Certificate*

Structural Stability Certificate means a certificate issued by Structural Engineer stating that the building has been constructed as per the design, under the supervision of the competent professional and that the building is stable and fit for occupation and shall comply with the relevant rule and/or regulations.

5.4.14.11 *Service Requests*

This means the owner can request the ULB for the temporary service provisions at the site such as water, sewerage, drainage etc. along with the requisite documents and fees.

5.5 Building Plan Approval Reports and Key Performance Indicators (KPIs)

Building Plan Approval Reports and KPIs are documents that present information in an organized format for various stakeholders, especially in the form of an official document, after thorough investigation or consideration by an appointed person or body at the ULB.

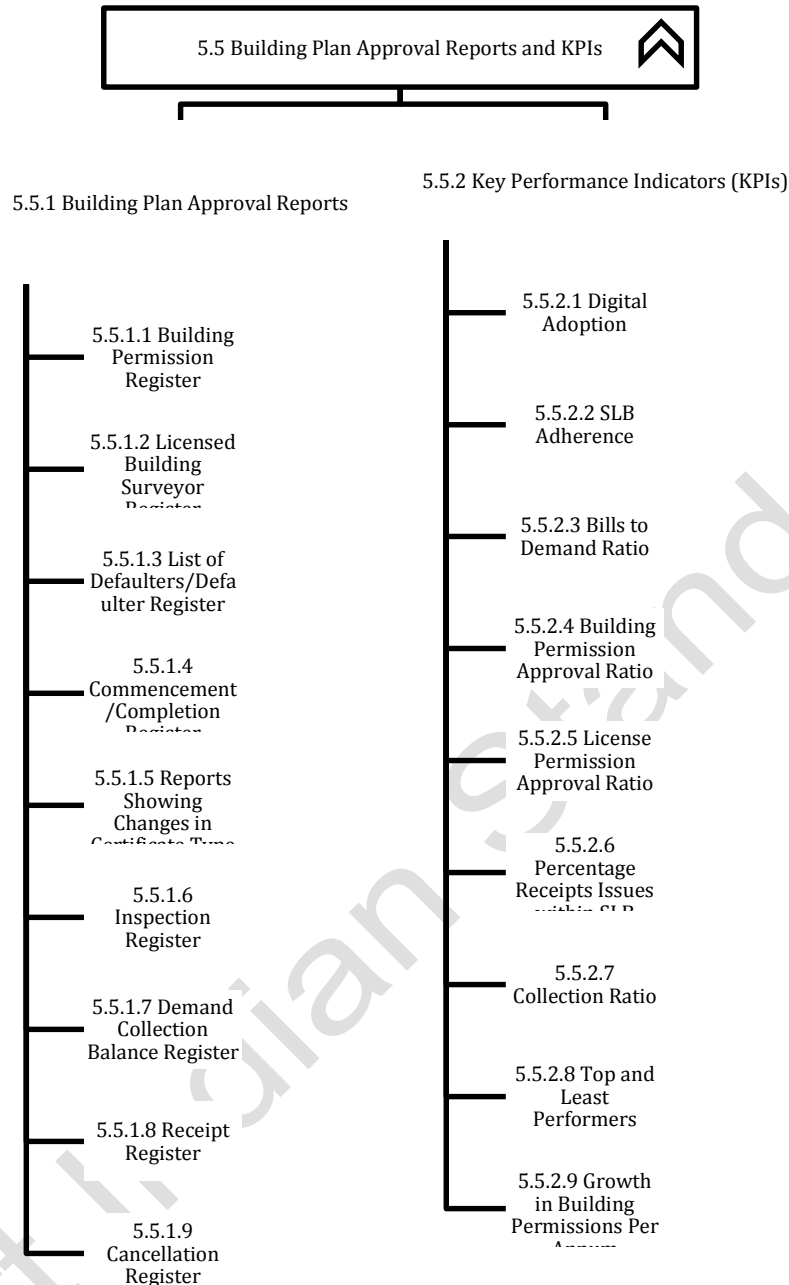


Fig. 34 Taxonomy for Building Plan Approval Reports and KPIs

5.5.1 Building Plan Approval Reports

BP Reports notifies the authorized body or organisation about the complete information of all Building Permission Certificates which are raised through various governance channels. These reports should be maintained by the authorized body or organisation.

5.5.1.1 Building Permission Register

This register lists all the building/ planning permits in the ULB. This register provides details about the application number, name, address, zone, ward, and expiry date of the building/ planning permit.

5.5.1.2 Licensed Building Surveyor Register

This register lists all the licensed building surveyors in the ULB. This register provides details about the licensed building surveyor number, name, and address, license from date and license to date of the licensed building surveyor.

5.5.1.3 List of Defaulters/ Defaulter Register

List of Defaulters or Defaulter register provide details of BPA defaulters, as on date. Defaulter is a person or body that has not paid last or previous BPA bills. This covers assessment number, owner details, building details, demand year and arrears.

5.5.1.4 Commencement/ Completion Register

This register lists all the commenced or completed building details in the ULB. This register provides details about the building application number, name, and address, zone, ward, survey no., and other details of the building.

5.5.1.5 Report Showing Changes in Certificate Type

Reports showing changes in certificate types as based on change in BPA requests, date of requests, status of requests etc.

5.5.1.6 Inspection Register

This register lists all the inspection details of the buildings in the ULB. This register provides details about the service request number, name, and address, zone, ward, survey no., and other details of the building along with the inspection status.

5.5.1.7 Demand and Collection Balance Register

This report provides details about demand, collection, balance and collection percentage details.

5.5.1.8 Receipt Register

This report provides details about the payment made and receipt issued after the payment of fees.

5.5.1.9 Cancellation Register

Cancellation register report provides the information about the total number of OCCC/BSL that are cancelled in a given interval. This report gives a clear idea about the details like building details, applicant details, zone/ ward/ SI Ward, current owner and status about the BPA.

5.5.2 Key Performance Indicators (KPIs)

This refers to KPIs that should be captured for BPA management.

5.5.2.1 Digital Adoption

Digital Adoption means attaining a state where an individual is capable enough to utilize an application, software, or tools to its fullest capacity or the potential to carry out a variety of digital processes. Digital adoption of BPA can be measured in the following terms:

- a) Percentage of citizens using digital channels for BPA payment
- b) Percentage of citizens using digital channels for accessing services
- c) Percentage of Volume from different channels
- d) Percentage of NOCs allocated within SLB

5.5.2.2 SLB Adherence

SLB Adherence means the number of applications processed by the ULB within SLB as determined by the rule or the law.

5.5.2.3 Bills to Demand Ratio

This means comparing the number of generated bills with respect to the number of demands generated for the applied BPA requests to account collections by the BP fees.

5.5.2.4 Building Permission Approval Ratio

This means the number of total OCC issued in comparison to total number of applications received for BPA in an area.

5.5.2.5 License Permission Approval Ratio

This means the number of total building surveyor licenses issued in comparison to the total number of applications received for BPA in an area.

5.5.2.6 Percentage Receipts Issued within SLB

This means the percentage of receipts issued within the agreed SLB parameters (time, priority, others as needed).

5.5.2.7 Collection Ratio

This means the percentage of collections as per billing period, time and area.

5.5.2.8 Top and Least Performers

Top and Least Performers list provides information about the zones/wards that have highest and least collection ratios as well as the bills to demand ratio in the ULB.

5.5.2.9 Growth in Building Permissions Per Annum

This means comparison of the number of building permissions approved year on year.

6. COMPLIANCE ASSESSMENT AND PERFORMANCE EVALUATION FRAMEWORK (CAPE)

6.1 Overview

The objective of the framework is to provide a roadmap to Indian cities in combating the challenge of data inconsistencies and interoperability. The Compliance Assessment and Performance Evaluation Framework (CAPE) consists of module-specific indicators defined in Standards under two parameters namely **Terminology Assessment** and **Process Assessment** across 5 sections (i) Data Entities, (ii) Channels, (iii) Stakeholders, (iv) Process and (v) Reports and KPIs. The framework provides an assessment of both terminology and process (functionality) compliance. The indicators are progressive in nature to support cities in assessing where they stand and encourage them to adopt appropriate actions enabling them to improve their score in the future and consequently enable data-driven governance.

- 1) **Compliance Assessment of Services:** To periodically assess the maturity of service functionality on a digital platform and its process harmonisation.
- 2) **Knowledge Exchange:** To enable peer-to-peer learning and allow cities to replicate success, use the learnings of others.
- 3) **The standard frame of reference through Benchmarking:** To help in developing common understanding and standardisation on Digital municipal services solutions, architecture, and components among various stakeholders viz. equipment manufacturers, system integrators, startups, domain experts, consultants, and city administration

- 4) **Gap Assessment:** To help Cities identify gaps in capabilities across municipal services dimensions.
- 5) **Catalyse Scalable Model:** To help in replicating the successes and avoiding redundancy in data, reduce the burden on administrators, harmonise terminology and processes and increase syntactic and semantic interoperability. It will also act as a launch pad for the cities which are yet to commence their digital platforms solution design, and system integration, monitor city operations, and prepare SRS, FRS and Model RFPs for implementation.

This document has been designed to help States/UTs or Cities find answers to the following questions through assessment activities:

Terminology Assessment	<p>Asses the difference in terminologies and their definitions for urban governance services</p> <ol style="list-style-type: none"> a) Is the city will be able to use the same data across services? b) Are the data entities captured in services being used in the processes? c) Asses the redundancy in data collection?
Process Assessment	<p>Asses the process flow in urban governance services</p> <ol style="list-style-type: none"> a) Ensuring convergence of applications/systems/databases b) Leveraging all available data entities in the process flow/analysis/monitoring? c) Asses the functionality of establishing interlinkages with various related departments d) Asses the capability of automating the reports and use of KPIs

6.2 Key Parameters

The various components and key parameters under the two dimensions are explained below in detail:

6.2.1 Terminology Assessment

The terminologies should be assessed over the following components;

- 1) **Accuracy:** The taxonomy should accurately reflect the meaning of the concept it represents. It should be free from ambiguity and provide precise and unambiguous definitions.
- 2) **Completeness:** The taxonomy should cover all relevant concepts related to the domain it represents. It should include all necessary terms and definitions required to describe the domain.

- 3) **Consistency:** The taxonomy used should be consistent in its use of terms and definitions across different parts of the domain it represents and various services. It should avoid using different terms or definitions to describe the same concept in various services or processes.
- 4) **Clarity:** The taxonomy should be easy to understand and use. It should be accessible to a wide range of users.
- 5) **Relevance:** The taxonomy should be relevant to the context in which it is used.

Key Parameters

1. Data Entities Compliance - verification of the data entities captured in a module
2. Channels Compliance - mapping the various channels to provide service to enhance the accessibility among citizens
3. Stakeholder Engagement Compliance- mapping the stakeholders involved in the service and assessing the ease of communication
4. The process to Data Entities Compliance - mapping input and output in the process flow and assessing any redundancy during the process
5. Reports and KPIs Compliance - mapping basic minimum reports and KPIs required for analysis and monitoring

6.2.2 *Process Assessment*

- 1) **Accuracy:** The taxonomy should accurately reflect the meaning of the concept it represents. It should be free from ambiguity and provide precise and unambiguous definitions.
- 2) **Completeness:** The taxonomy should cover all relevant concepts related to the domain it represents. It should include all necessary terms and definitions required to describe the domain.
- 3) **Consistency:** The taxonomy used should be consistent in its use of terms and definitions across different parts of the domain it represents and various services. It should avoid using different terms or definitions to describe the same concept in various services or processes.
- 4) **Clarity:** The taxonomy should be easy to understand and use. It should be accessible to a wide range of users.
- 5) **Relevance:** The taxonomy should be relevant to the context in which it is used

Key Parameters

1. Process Flow Compliance - mapping the existing processes and gap identification
2. Interoperability Between Departments - mapping the use of various related data entities in services between different departments
3. Functionality Interlinkage - mapping integration with Aadhaar/ DigiLocker-like initiatives of other ministries and departments
4. Platform Compliance - mapping the availability of the functionalities available on the platform such as auto fetch, generate reports, escalation etc.

6.3 Methodology

The Compliance Assessment and Performance Evaluation Framework (CAPE) assess the readiness of the municipal digital service on data across Terminology and Process Compliance. The State/UT or Cities modules are scored on a scale of 0 to 1.

6.3.1 CAPE Scoring

The final score is a combination of the following assessment based on the respective Standard Module.

Table 1 CAPE Scoring

Parameter	Weightage	Objective
Terminology Assessment	40%	To assess the difference in terminologies and their definitions for urban governance services
Process Assessment	60%	To assess the process flow harmonisation in urban governance services

$$\text{CAPE Score} = (0.4 * \text{terminology assessment score}) + (0.6 * \text{process assessment score})$$

The following weights will be applicable for assessment scoring

Table 2 Weightage of Terminology and Process Scoring

Parameter	Sections of Standards	Weightage
Terminology Assessment	Data Entities	25%
	Channels	5%
	Stakeholders	10%
Process Assessment	Processes	40%
	Reports	10%
	KPIs	10%

Terminology Assessment Score = (0.25 * Data Entities Assessment Score) + (0.05 * Channels Assessment Score) + (0.10* Stakeholders Assessment Score)

Process Assessment Score = (0.40* Process Assessment Score) + (0.10* Reports Assessment Score) + (0.10* KPI Assessment Score)

7. SELF-ASSESSMENT TOOLKIT

For Terminology Assessment, each indicator needs to be mapped with the following response viz.: Yes/No. For each “Yes” response, 1 (One) mark should be allotted and for each “No” response, 0 (zero) mark should be allotted. “Yes” means exact terminology available.

For Process Assessments, each indicator shall be mapped with the following responses -Yes, No, or NA (Not Applicable). For each “Yes” response, 1 (One) mark should be allotted and for each “No” response, 0 (Zero) mark should be allotted. For NA response, mapped indicator should not be considered for assessment. If 30% or more of responses are NA, then the State/UTs or city should assess low compliance for the respective component. The cumulative of each process shall be marked further with the following responses – Fully Available, Partially Available and NA (Not

Available). For Fully Available (100%), 1 (One) mark should be allotted, for Partially Available ($\geq 50\%$), 0.5 mark should be allotted and for NA 0 (Zero) mark should be allotted.

7.1 CAPE Compliance Classification

s
 State/UTs or ULBs will be ranked by cumulating the marks obtained in 2 parameters against the total marks. Ranking will be allocated as per below mentioned criteria (marks will be converted into percentages).

Table 3: CAPE Levels

Criteria	Upto 30% Compliance	30%-60% Compliance	60%-80% Compliance	80% & above Compliance
Levels	0	1	2	3
Labels	Not Compliant	Partially Compliant	Compliant	Fully Compliant

ANNEX A

(Clause 5.1)

SAMPLE PARAMETERS AND SPECIFICATIONS IN BUILDING PLAN APPROVAL

A-1 Sample Parameters and Specifications for Location

Attribute Name	Locational Specification	Data Type	Mandatory (Yes/No)
Address	House No, Building Name, Plot/Survey No, Street Name, Locality, Zone/Ward, City/Town, District, Region, State, Country, Pin code	Varchar (256)	No
Geo Location	Latitude, Longitude, Polygon	Numeric (9,6)	Yes
Other evidences	This can include Geo tagged images of Property, DDN, QR codes etc.		No

- a) **Address:** The address of the property provides the particulars of the place as per the administrative boundaries or norms defined by the local governing body.

- b) **Geo Location:** Geolocation is the identification or estimation of the real-world geographic location of property. This refers to the latitude and longitude coordinates of a particular location where property is located.
- c) **Digital Numbers:** Property Numbers defined using scientific methods and often assigned with QR code for traceability and usability.

A-2 Sample Parameters and Specifications of Measurements for Different Types of Property

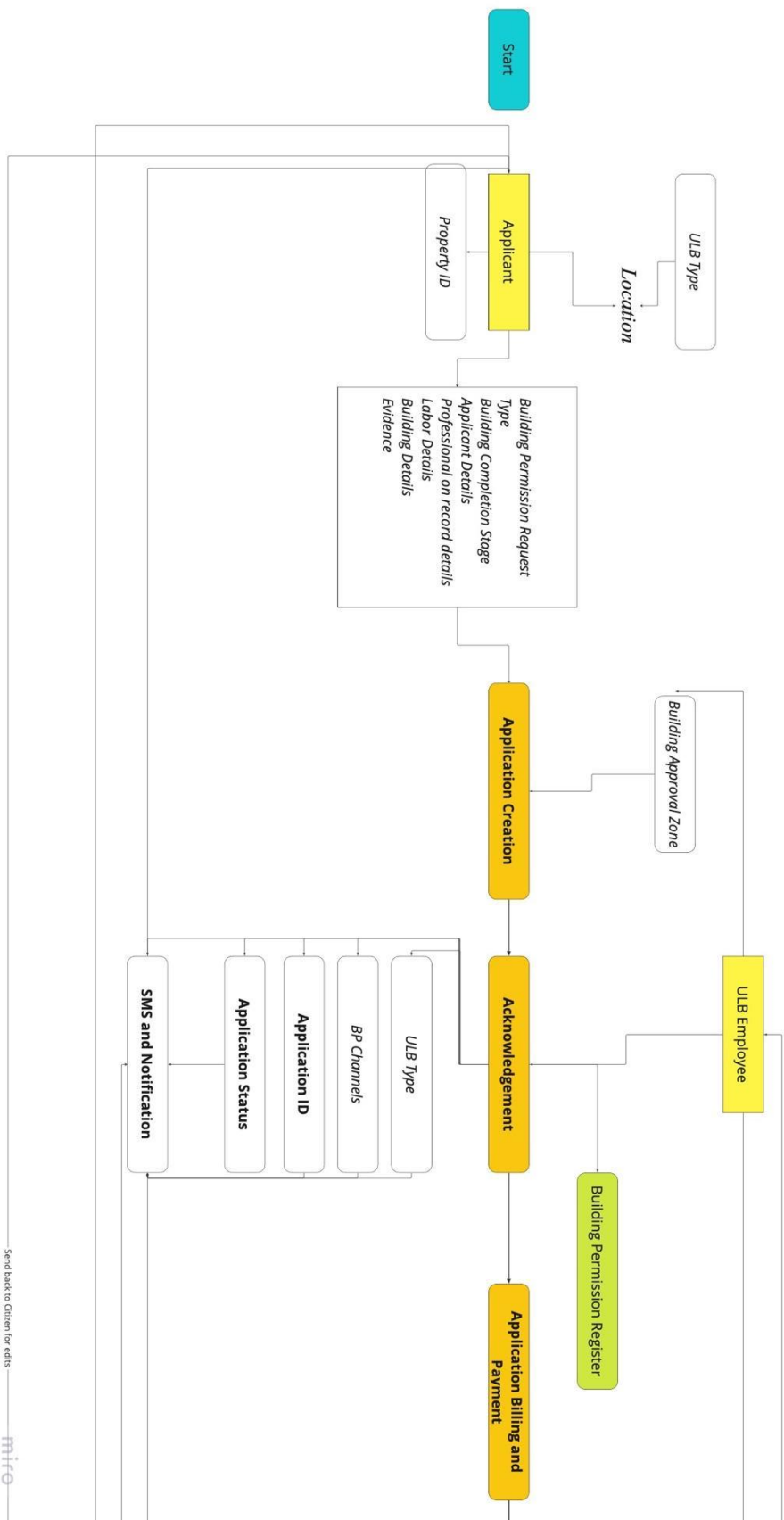
Type of Property	Area of Measurement	Representation on Map
Vacant Land	Polygon Area (square feet or m ²)	Polygon
Built Structure	Built Up Area of Premise (square feet or m ²)	Polygon, Centroid
	Appurtenant Area (square feet or m ²)	Polygon, Centroid

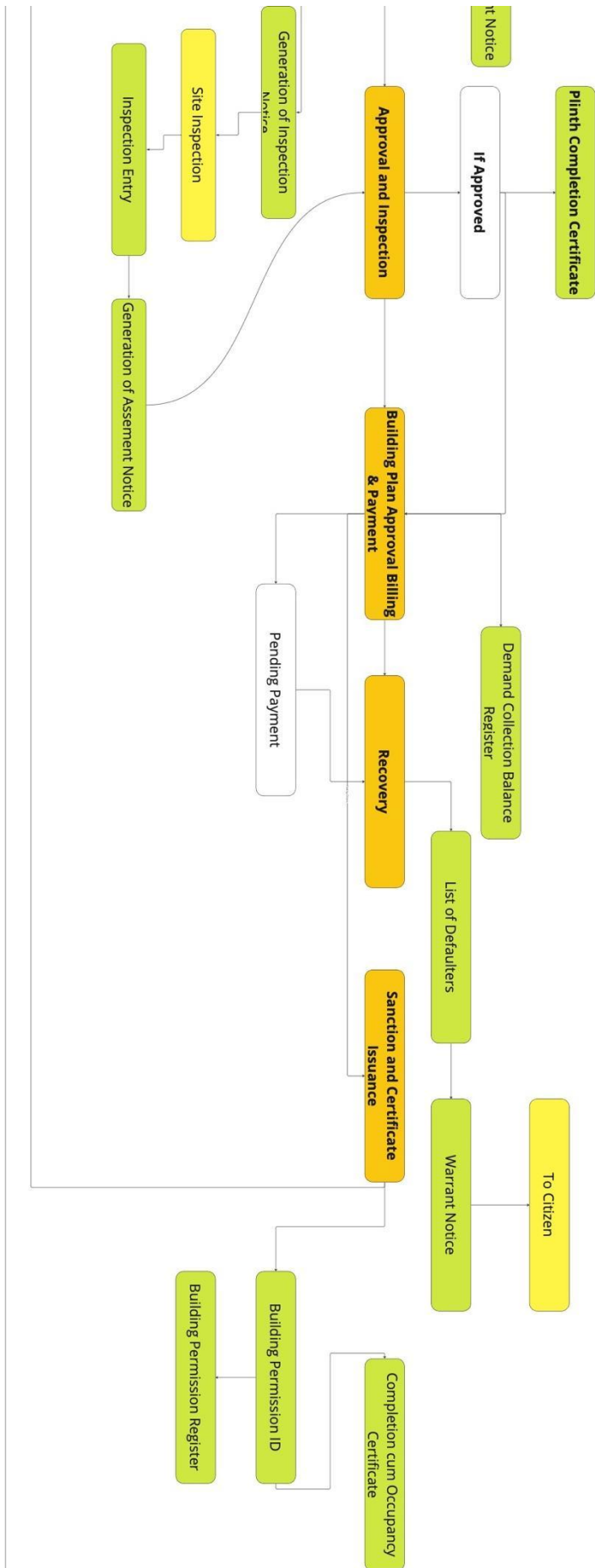
A-3 Sample Taxpayer Services with respect to Construction Stage and Core Processes and for Building Plan Approval

Construction Stage	Taxpayer Services	Provider	Core Service - Building Plan Approval
Pre-Construction	Ownership Record	Revenue Department	Plan Approval
	Environmental Clearance	Ministry of Environment, Forest and Climate Change	
	Consent to Establish	Pollution Control Board	
	AAI No objection	Airport Authority of India	
	Provisional Fire NOC	Urban Local Body	
	Tree cutting permission	Urban Local Body /Forestry Department	
	Construction Power	Public Works Department	

During Construction	Power sanction	Public Works Department	Plinth Completion and Inspection
Post Construction	Lift Licence	Public Works Department	Occupancy Certificate
	Consent to Operate	Pollution Control Board	
	Fire NOC	Urban Local Body	
	Green building	Indian Green Building Council	

A- 4 Sample Process Flow of Building Plan Approval





ANNEX-B

PANEL INVOLVED IN THE PREPARATION OF THE STANDARD

<i>Organisation</i>	<i>Representatives</i>
National Institute of Urban Affairs	Ms Priya Upadhyay (Project Leader)
Indian Institute of Technology Roorkee	Prof Arindam Biswas
Town and Country Planning Organisation	Mr Baskar Sellaiya
RTI International India	Dr Gaurav Bhatiani
Punjab Urban Development Authority	Ms Geetika Singh
Indian Institute of Public Administration	Dr KK Pandey
All India Institute of Local Self-Government	Mr Pashim Tewari
Tata Consultancy Services	Dr Praful Gharpure
Independent Consultant	Dr Ravikant Joshi
CEPT University	Dr Saswat Bandopadhyay
Independent Consultant	Mr Shobhit Verma
Ernst and Young, India	Mr Sudip Datta

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