

# Professional Practice

**B. ARCH – 10<sup>th</sup> Semester**

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# Buildings– Role and Importance

- Buildings are structures used for human activities
- All human activities are performed in buildings–living, working, care of body & spirits
- Buildings are consumers of energy (50%)
- Buildings are consumers of resources
- Buildings are generators of waste
- Buildings have large carbon footprints
- Buildings are responsible for global warming
- Buildings are determinant of global sustainability
- Buildings are integral part of human journey since inception
- Buildings shall continue to be part of human growth and development
- Buildings are responsible for creating manmade environment– vital for human growth
- Buildings are living organism

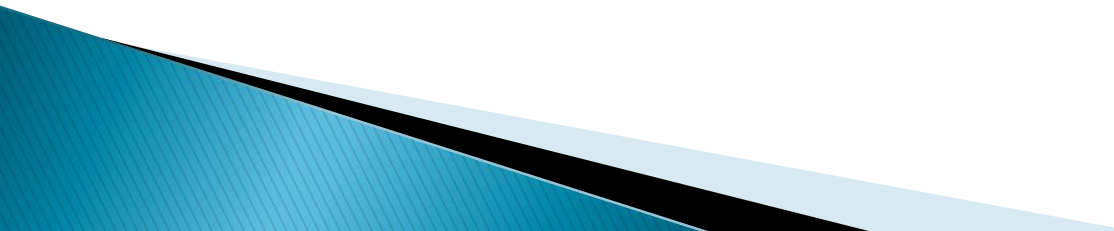
# Buildings– Role and Importance

- Buildings vital for human living
- Buildings provide optimum/worst living conditions
- Buildings make people healthy/sick
- Buildings critical because majority of human life spent in buildings
- A well designed school makes learning easy and more meaningful
- A well designed house makes people happy and healthy
- A well designed hospital can cure patients quickly
- A well designed shopping mall can increase sale and profits
- Large volume of buildings yet to be constructed
- India needs to construct annually 700–900 msqmts of built space --to meet increased needs of ever rising population for housing, education, healthcare, industry, institutions, trade and commerce, entertainment , leisure etc.

# Need for State of Art Buildings

- The buildings in which we
- live,
- work, and
- play
- protect us from nature's extremes
- yet they also affect our health and environment in countless ways.
- --All building activities including ;
- designing, construction, use, re-furbishment , demolition and re-construction--- directly/indirectly impact Cost , environment and energy
- -Considerable reduction of Cost /energy / green house gas emission by built environment possible-- by changing the way buildings are planned, designed, constructed and operated

# What is Architecture

- ▶ Art and Science of designing and creating buildings
  - ▶ Profession of designing buildings, open spaces , communities and other physical structures
  - ▶ Architecture is both process and product of planning, designing, constructing buildings and other physical structures
  - ▶ General term used to describe:
    - Buildings and other physical structures
    - style of design and method of construction of buildings
    - knowledge of art , science and humanities
    - design activities of an Architect spans from micro to macro level
- 

# Who is an Architect

Derived from --Greek Word--Arkhi--tecton ( Head--Builder)

- ▶ Architect-- is a person who plans, designs and reviews the construction of Buildings
- ▶ A person who is Registered, licensed or otherwise authorized to use the title of Architect and practice architecture in a province/area
- ▶ Who possesses
  - skill in art of designing buildings to meet clients needs
  - Knowledge about aesthetics as well as practical considerations
  - adequate skill and knowledge to originate, design and plan to arrange and supervise construction of buildings
- ▶ Role of Architect extends from field of technical knowledge to business management

# ► Role of an Architect

# Role of Architect

## ▶ Role of Architect includes:

- designing buildings
- helping client to define/ freeze scope of work
- selection of site
- preparing feasibility reports
- creation of new design ideas
- carrying out building audit
- identifying/engaging consultants; specialists, contractors,
- coordinating design team- structure, mechanical, electrical, air-conditioning, services
- answerability to client for- Design, Construction, Materials, Building
- close and fiduciary relationship with client
- based on Trust, faith and goodwill

# Role of Architect

- ▶ Role of Architect not limited to creation of new ideas/designs but also include
  - Preparation of contract documents
  - Calling of tenders
  - Selection of contractors
  - award of work to contractors/ specialists
  - inspection of work
  - Selection of materials
    - finding solution to problems encountered during construction/execution of work
    - maintaining quality of work
    - rejecting defective work
  - ensuring construction of building as per approved drawings
  - Execution of work as per contract
  - approving payments of work as per contract
  - resolving disputes between owner and the contractor
  - ensuring completion of work
  - obtaining completion and possession certificates for buildings

# ► Profession & Character of Architecture

# Profession of Architecture

- ▶ Profession calls for having persons/men of;
- ▶ INTEGRITY
- ▶ BUSINESS CAPACITY
- ▶ ARTISTIC ABILITY
- ▶ Architect --entrusted with financial undertaking --in which his honesty of purpose should be above suspicion
- ▶ As Professional advisor to his client---his advice must be absolutely disinterested/unbiased
- ▶ --while exercising judicial functions --between client and contractor-- must act impartially
- ▶ has moral responsibility to
  - ▶ -- Profession,
  - ▶ --society
  - ▶ --environment
  - ▶ --Associates
  - ▶ --Subordinates
  - ▶ -- professional institutions

# Character of Profession

- ▶ Every profession involves :
  - i. Mastery of specific activity
  - ii. Possessing adequate knowledge and understanding
  - iii. Prolonged period of study/practice
  - iv. Membership of a professional body/association
  - v. Prescribed code of conduct
  - vi. Social responsibility
- ▶ All professionals including Architect, Engineer, Doctor, Lawyer – required to :
  - provide selfless/disinterested services best to their capability to client– professionals have to---
  - promote welfare of community
  - has social responsibility
  - preserve environment
  - Minimizing depletion of resources
  - --promoting sustainable development
  - -- following local legal framework/ building bye-laws
  - - providing value for money of client

# Profession Vs Occupation

- ▶ **Factors differentiating Profession and Other Occupations:**
- ▶ i. **Qualification**– specific knowledge
- ▶ li **Membership of a professional institute**– for improved and latest professional knowledge and growth
- ▶ lii **Standards of Ethics**– governing the conduct, duties and obligations
- ▶ Iv **Code of Conduct**
- ▶ V **Attitude towards profit**– not primary but only incidental
- ▶ Vi **Social Responsibility**– commitment to society and its improvement
- ▶ **In case of Business and Trade—**
- ▶ I **Qualification** – not mandatory – for starting/running
- ▶ li **Profit**-- Prime motive is to earn **Profit**
- ▶ lii **Membership** of a professional body --not essential
- ▶ Iv **Relationship**--No direct contact between manufacturer and user/client– no flexibility to cater to individual requirement of user
- ▶ V. **Ethics and code of conduct** --usually defined by government guidelines
- ▶ Vi **Accountability** --Low level of –as compared to Architectural services
- ▶ Vii. **Social responsibility**– not mandatory, no professional advice rendered

# ► Architect's – Duties and Responsibilities

# Architect's – Duties and Responsibilities

- i Technical–Planning, designing, controlling construction, coordinating all activities
- ii Quasi – judicial—administering contract between client and contractor besides resolving conflicts between them
- lii Business– while dealing with client money

In addition--

- ▶ --Rendering quality services
- ▶ -- with highest level of Competency
- ▶ -- Exercising due care while rendering service
- ▶ --following Professional conduct

# Owners expectation from Architect

- i. **Skill & knowledge** –Architect has required level of competency/skill/knowledge to design the project
- ii. **Understanding**– purpose and function of building to be designed
- iii. **Legal knowledge**– Acts, Rules, bye-laws relating to designing, constructing --buildings/permission
- iv. **Cost**– ability to advise on cost to decide on scope/specifications
- v. **Drawings**– skill to prepare drawings, plans ,specification for execution/ approvals
- vi. **Payments**– ability to certify payments– bills
- vii. **Modifications**– skill for accommodating changes, if any, during construction
- viii. **Resolving problems**– relating to construction, contractor, authorities– through intervention and advice
- ix. **Quality**– ensure quality of work
- x. **Completion**– of project on schedule
- xi. **Service**– Render quality service
- xii. **Advise**– Render best of professional advice



# Indian Institute of Architects

Chandigarh



# Indian Institute of Architects–IIA

- **The Indian Institute of Architects (IIA) is the;**
  - -- National body of Architects in the country.
  - -- Established in 1917,
  - -- institute today has more than 20,000 members
  - -- plays major role in promoting profession of architecture--
  - by organising and uniting the Architects of India
  - to promote aesthetic, scientific and practical efficiency of the profession --both in Practice and in Education.
- IIA** represented on various national / international committees connected with architecture, art and the building industry and
- International Union of Architects (UIA)
  - Commonwealth Association of Architects (CAA) and
  - South Asian Association for Regional Co-operation of Architects (SAARCH).

# IIA—in Historical Perspective

- Birth of IIA -- in a meeting of past students of Architecture of Sir J.J. School of Art
- --- on May 12 , 1917,
- --in Mr. Foster King's bungalow,
- -- in School of Art compound
- -- where famous Rudyard Kipling was born on 30th December 1865.
- Members decided to form --association of the past students of Architecture of Sir J.J. School of Art .--"The Architectural Students Association".
- Late Mr. George Wittet--- then Consulting Architect to Government of Bombay-- elected as first "President"
- On 3rd August 1922--- converted' as **Bombay Architectural Association.**
- On 2nd September 1929 --new body was constituted in Bombay --
- registered as **"THE INDIAN INSTITUTE OF ARCHITECTS**
- --In 1929, the membership was 158.
- -- Today it has crossed the 20000 mark

# JJ SCHOOL OF ART& ARCHITECTURE MUMBAI



# J J SCHOOL OF ART & ARCHITECTURE MUMBAI



# Legal Status of the Institute

- ▶ --The Indian Institute of Architects is a society
- ▶ -- registered under the **Societies Registration Act XXI of 1860** –
- ▶ – as a voluntary organisation of Architects.
- ▶ – with its headquarter at Mumbai– DBN Road– Prospective Chamber
- ▶ – other organisation related to Architecture at national level is-- **Council of Architecture**
- ▶ --established under The Indian Architects Act 1972 --
- ▶ – with statutory duties of –
- ▶ ---Registration of Architects
- ▶ -- Prescribing norms/ minimum standards for Architectural education
- ▶ –Regulating the professional conduct of Registered Architects

▶ --

# Outreach Programmes of the Institute

- ▶ The Institute has major role to play in:
  - Promoting Profession of Architecture
- ▶ Serving large area / population of India
- ▶ Institute reaches to professionals/public through its :
  - Chapters--23 --where number of members= 100 or more
  - Centres-- 50-- where number of members= 50 or more
  - Sub-Centres--16-- where number of members=20 or more
  - Each state /UT can have one chapter
- ▶ Programmes arranged at headquarter/Chapters /centres involving local/ international participation
- ▶ Chapters / Centres communicate with professionals/ public by :–  
using the press and electronic media.
  - Organising seminars, workshops, Public lectures, Exhibitions, professional meets organised with Industry/other professional institutions
  - commemorating --World Environment Day, World Architecture Day, World Habitat Day etc.
  - Publishing --monthly Journal
  - JIIA and a Newsletter

# **IIA—Objectives**

**Constitution & Bye-Laws dated August 2, 1974, define 14 objectives of Institute of Architects which include**

**i) To continue the work of the:**

- Bombay Architectural Association / Architectural Students' Association and**
  - to take over all property of Bombay Architectural Association, which can legally be vested in the Institute and**
  - to manage it**
- 

**ii) To organize and unite in fellowship the architects in Republic of India.**

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**iii) To combine effort of Architects to promote:**

- Aesthetics,**
- Scientific and**
- Practical Efficiency of the Profession**

# **IIA-Objectives**

**iv) To encourage the science and art of planning and- building the standards of architectural education , training and practice by ;**

**-- giving grants or**

**-- by paying fees**

**-- giving scholarships/ prizes / rewards to students**

**v)To devise means for testing the qualifications for membership of the Institute by examination in theory / practice**

**vi) Regulate practice of architecture and take measures to improve practice of Architecture and amending law relating / affecting the practice of Architecture**

**vii) To hold conferences / meetings/discussion /exhibitions exchange of new on matters relating to Architecture and award medals, certificates, prizes**

**viii) To co-ordinate the activities of the building industry and of the profession of Architecture**

**ix) To purchase , lease, rent, hold and dispose of any land or property or any building or hall, and to erect any such building / buildings to be used as a place of meeting for the members of the institute**

## **IIA--Objectives**

- x) To acquire by purchase, donation etc a library and collection of models, drawings, designs or other materials, and to maintain, extend and improve the same.**
- xi) To formulate and notify the law and practice relating to Architecture to members and the public, and to compile, collect, print and publish statistics or periodicals relating to any of the objects of the Institute**
- xii) To issue appeals for funds, accept any gift etc made to the Institute, and to borrow moneys, if required for the purposes of the Institute**
- xiii) To ensure the advancement of the living standards of our people through their improved environment and to make the profession of ever increasing service to Society**
- xiv) To constitute various classes of members including Fellows;**
- xv) To do all such lawful things which are incidental or conducive to the attainment of the above objects or any of them**

# Boards–6 and Committees–13

- ▶ *IIA works through number of committees and Boards for its proper functioning and operations namely—*
- ▶ Finance Board
- ▶ Professional Services Board
- ▶ Board of Architectural Education
- ▶ Board of Examination
- ▶ Publication Board
- ▶ International Affairs Board-----
- ▶ Employed Architects Committee
- ▶ Membership Growth Committee
- ▶ Sohrab Bharucha Library Committee
- ▶ R & D Continuing Education Committee
- ▶ Events & Programme Committee
- ▶ Sports & Culture Committee
- ▶ Building & Infrastructure Development Committee
- ▶ E–Governance Committee
- ▶ Green and Sustainable Architecture Committee
- ▶ Committee on Architects Social Responsibility
- ▶ Committee on Women Architects
- ▶ Young Architects Committee
- ▶ Public Relations Committee

# Other Activities

- ▶ **AWARDS**—Lifetime achievement awards for contribution to the profession/education—Best Thesis Award
  - ▶ – IIA National awards for excellence in Architecture
- ▶ **NATCON**
- ▶ **Young Architects Festival**
- ▶ **JOURNAL**— JIIA monthly— E— journals
- ▶ **Professional Publications**
- ▶ **NEWS LETTER**
- ▶ **IIA EXAM**
- ▶ **I IPL**
- ▶ **– PHOTO–GALLERY**
- ▶ **MEMBERSHIP**— Fellow, Associates, Direct fellow, Honorary Fellows, Licentiates, , Student Members
- ▶ **Recognizing architectural institutions**
- ▶ **Prescribing professional code of conduct**
- ▶ **IIA Vs COA**

# **,Managing IIA–Stucture**

## **1 Office Bearers—**

- ▶ **President**
- ▶ **Vice– President**
- ▶ **Junior Vice– President**
- ▶ **Treasurer**
- ▶ **Joint Hon Secretaries–2**

## **2. Council Members( directly elected)–10**

## **3. Ex–officio members — All Chapter Chairpersons**

## **4 Trustees**

## **5 Office Bearers – all day to day operations**

## **6 Council– OB+ Council members+ all chapter chairpersons**

## **7.Election held after every 2 years**

# Indian Institute of Architects

- ▶ IIA is the oldest and the only professional body of India – with membership restricted only to the Architects
- ▶ It has history spanning over 100 years
- ▶ It looks after the interests of the profession and professional architects
- ▶ It aims at promoting the cause of architectural education in the country
- ▶ It undertake measures to ensure compliance with the professional ethics by the architects
- ▶ It takes up professional issues with all public/parastatal agencies
- ▶ It promotes industry–profession interface
- ▶ Its aims/objectives are related to the promotion of profession of architecture and make it more effective and efficient
- ▶ It is a society registered under the Indian Society Act
- ▶ It has no statutory/legal backing
- ▶ It is not mandatory to become member of the IIA.
- ▶ It brings in promoting brotherhood/fellowship among architects
- ▶ It aims at bringing all architects of the country on a single platform.
- ▶ It connects the Indian architects with other professional institutes of different countries globally
- ▶ It has been instrumental in bringing– The Indian Architects Act, 1972–
- ▶ It holds membership of international professional bodies of architects– SAARCH , ACA, UIA etc

# ▶ The Indian Architect Act, 1972

# Indian Architect Act- 1972

- ▶ The Indian Architects Act, 1972, – central law– enacted by the Parliament in the Twenty-third Year of the Republic of India
- ▶ Preamble– An Act to provide for registration of architects and for matters connected therewith. :-
- ▶ It extends to the whole of India.
- ▶ It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint---- 1st September, 1972.
- ▶ The Act provides for:
  - ▶ i. registration of Architects,
  - ▶ ii prescribing standards of education & recognized qualifications
  - ▶ iii prescribing standards of practice to be complied with by the practicing architects.
- ▶ **The Architects Act, 1972**
- ▶ **Rules - 1973**
- ▶ **Regulations - 1982**
- ▶ **Minimum Standards of Architectural Education, 1983**
- ▶ **Architects (Professional Conduct) Regulations 1989**

# Indian Architect Act– 1972– definitions

- ▶ "Architect"-- means a person whose name is for the time being entered in the register;
- ▶ "Council"-- means the Council of Architecture constituted under Section 3;
- ▶ "Indian Institute of Architects"-- means the Indian Institute of Architects registered under the Societies Registration Act, 1860;
- ▶ "Recognised qualification"-- means any qualification in architecture for the time being included in the Schedule or notified under section 15;
- ▶ "Register"-- means the register of architects maintained under section 23
- ▶ "Regulation" means a regulation made under this Act by the Council;
- ▶ "Rule" means a rule made under this Act by the Central Government

# ► Council of Architecture

# Indian Architect Act– 1972– COA

- ▶ The Central Government shall,
  - ▶ -- by notification in the Official Gazette, constitute,
  - ▶ -- a Council – known as **the Council of Architecture,**
  - ▶ --which shall be a **body corporate,**
  - ▶ -- having **perpetual succession** and
  - ▶ --**a common seal,**
  - ▶ -- with **power to acquire, hold and dispose of property-- both movable and immovable, and**
  - ▶ -- **to contract, and**
  - ▶ -- may by that name **sue or be sued.**
  - ▶ -- **The Head Office of the Council shall be at Delhi or**
  - ▶ -- **at other place notified by the Central Government in the Official Gazette,**

# Indian Architect Act– 1972– COA

- ▶ Council of Architecture (COA) has the responsibility to Regulate the :
  - ▶ i Minimum standards of Architectural Education
  - ▶ ii Practice of profession throughout India
  - ▶ iii Registration-- Maintaining the Register of architects.
- ▶ Government of India framed Rules--**Rules - 1973**
- ▶ Council of Architecture has framed Regulations to implement the Act--. **Minimum Standards of Architectural Education, 1983**
- ▶ **Architects (Professional Conduct) Regulations 1989**

# ► Constitution of COA

# **Composition of COA:–18+one architect nominated by each State/UT(37)–28+9**

- ▶ **Five architects elected by the IIA from among its members;**
- ▶ **Two persons nominated by the All India Council for Technical Education (AICTE)**
- ▶ **Five persons elected by heads of architectural institutions in India imparting full-time instruction for recognised qualifications;**
- ▶ **Three Chief Architects in the Ministries of the Central Government relating to defence, railways, CPWD nominated by the Central Government;**
- ▶ **An architect from each State nominated by the Government of that state;**
- ▶ **Two persons nominated by Institution of Engineers (India) from among its members; and**
- ▶ **One person nominated by the Institution of Surveyors of India from among its members ,**
- ▶ **elected/ nominated member shall hold office for three years from date of his election / nomination or until his successor has been duly elected / nominated whichever is later.**
- ▶ **Members of Council shall be eligible for re-election / re-nomination-- but not exceeding three consecutive terms**

# COA- MEMBERS

- ▶ **Elected / nominated member**-- shall hold office for three years from date of election/ nomination or
  - ▶ -- until his successor elected /nominated --whichever is later
  - ▶ .-- member may, at any time
  - ▶ -- resign his membership by writing under his hand
  - ▶ -- addressed to President/ in absence, to Vice-President, and
  - ▶ -- seat of such member shall become vacant.
- ▶ **A member deemed to have vacated his seat** --
  - --If absent without sufficient EXCUSE
  - --from three consecutive ordinary meetings of Council; or
  - --If he ceases to be a member of the body by which he was elected or nominated or
- ▶ --- if he ceases to be head of an Institution.
- ▶ **A Casual vacancy in Council** ;-- filled by fresh election/ nomination -- person so elected /nominated to fill the vacancy
  - ▶ -- shall hold office only for remainder of term
  - ▶ -- for which member whose place he takes was elected/ nominated.
  - ▶ --Members of Council shall be eligible for- re-election/ re-nomination-- not exceeding three consecutive terms

# COA– MEMBERS–meetings

- ▶ **.A person shall not be eligible for election /nomination as a member if–**
  - ▶ -- declared an un-discharged insolvent–.
  - ▶ -- convicted by a court in India for any offence and sentenced to imprisonment for not less than two years-- shall be ineligible for a further period of five years
- ▶ **The Council shall meet at least once in every six months** –at such appointed time/ place to the transaction of business
  - **nine members** shall form a quorum,
- ▶ -- decisions made by majority of members present and voting.
- ▶ --In case of equal votes, President/ Vice-President/ member presiding over meeting-- shall have a second or casting vote.

# COA-office bearer/President/ Vice-President

- ▶ **Council to elect--President / Vice-President of Council** --shall be elected by members of Council from among themselves:
- ▶ **Elected President /Vice-President** --shall **hold office for a term of three years or** --till he ceases to be a member of Council, whichever is earlier,
  - but subject to his being a member of Council-- he shall be **eligible for re-election**:
  - **President/ Vice-President--** may resign from office by writing under his hand-- addressed to Vice-President / President, as case may be,;
- ▶ **President / Vice-President** -- even after expiry of his term of three years-- continue to hold office until his successor enters upon office
- ▶ **President/ Vice-President** -- shall exercise such powers and discharge such duties-- as may be prescribed by regulations.

# COA– office bearers

- ▶ Council to constitute from among its members an:–
- ▶ **Executive Committee, and**
- ▶ **other committees -- to carry out its functions under the Act.**
- ▶ **The Executive Committee shall consist of;**
- ▶ **President ,**
- ▶ **Vice-President and**
- ▶ **five other members--elected by Council from among its members.**
- ▶ **The President /Vice-President – to be Chairman / Vice-Chairman of Executive Committee.**
- ▶ **Member of Executive Committee --shall hold office until expiry of his term as a member of Council he shall be eligible for re-election.**
- ▶ **Executive Committee shall exercise such powers / discharge such duties as may be defined by Act/ regulations**
- ▶ **Elections conducted in manner prescribed by rules**
- ▶ **in case of dispute --regarding elections– matter referred by Council to a Tribunal appointed by Central Government– if complaint made within 30 days of election result– cost of tribunal paid by council**

# COA– employees, fund, functions

Council shall appoint–

- i a **Registrar** who shall act as its Secretary / treasurer;
- ii **other officers / employees**
- to carry out its functions under this Act;
- iii **Establish a Fund under management/ control of the Council** –into which all moneys–gift/grant/ fee received/fee shall be paid and out of which all expenses and liabilities shall be met–maintain accounts– capital/revenue– get it audited –published in Official Gazette audited accounts / report of Council for year –latest by 30th September and copies of accounts/ report forwarded to Central Government
- The Council may prescribe the:
  - i. **minimum standards of architectural education** required for granting recognised qualifications by colleges or institutions in India
  - ii. **standards of professional conduct / etiquette** and a code of ethics for architects-- violations thereof shall constitute infamous conduct/ professional misconduct
  - iii **Prepare and maintain a register of Architects for India**

# qualification for registration as architect

- ▶ Qualifications included in schedule/notified under section 15 shall be recognised qualifications for registration
- ▶ --Any authority in India-- which grants architectural qualification-- not included in schedule-- may apply to Central Government-- for recognising qualification-- Government after consultation with Council--may amend schedule--include such qualification-- declaring it to be a recognised qualification .
- ▶ --Central Government may--after consultation with Council-- may by notification in Official Gazette, amend schedule --by directing that an entry be made in respect of any architectural qualification.
- ▶ -- any recognised qualification shall be sufficient qualification for enrolment in the register

- ▶ **Inspection /**
  - ▶ **Recognition of  
Architectural  
Institutions**
- 

# Approval of the Architectural institutes

- ▶ 18.) Every authority in India which grants a recognised qualification shall
  - ▶ --furnish to Council may, from time to time--
  - ▶ -- courses of study /examinations undergone to obtain qualification,
  - ▶ --period of study and examinations are required to be undergone
  - ▶ --requisites for obtaining such qualification.
- ▶ 19.) Executive Committee shall, subject to regulations,
  - ▶ --appoint such number of inspectors
  - ▶ -- to inspect any college / institution
  - ▶ -- to attend any examination held by any college/ institution
  - ▶ --for recommending to the Central Government
  - ▶ --recognition of qualification granted by that college/ institution.
  - ▶ -- inspectors shall not interfere with conduct of training /examination,
  - ▶ --report to Executive Committee
  - ▶ --on adequacy of standards of architectural education including
  - ▶ --staff, equipment, accommodation, training and such other facilities
  - ▶ -- as prescribed by regulations for giving such education
  - ▶ -- or on sufficiency of every examination which they attend.
- ▶ -- Executive Committee shall forward a copy of such report
- ▶ -- to college / institution
- ▶ --also forward copies with remarks of college / institution thereon, to Central Government.

# Approval of the Architectural institutes

- ▶ 20.)-- When upon report by Executive Committee it appears to the Council –
  - ▶ --That courses of study / examination to be undergone / proficiency required from candidates at any examination held by, any college/ institution, or
  - ▶ -- staff, equipment, accommodation, training and other facilities for staff / training provided ,
  - ▶ -- Do not conform to standards prescribed ,
  - ▶ -- Council shall make representation to appropriate Government.
  - ▶ --After considering such representation
  - ▶ -- appropriate Government shall forward it along with remarks
  - ▶ -- to college/ institution; with an intimation of period;
  - ▶ -- within which institution to submit explanation to appropriate Government.
- ▶ --On receipt of explanation or
- ▶ -- where no explanation is submitted within period fixed,
- ▶ -- on expiry of period, State Government,
- ▶ -- in respect of the college / institution shall make its recommendations to Central Government.

# Approval of the Architectural institutes

- Central Government --After making any enquiry,
- in respect of institution or
- On receipt of explanation from institution
- or where no explanation is submitted within the period fixed, then on the expiry of that period,
- May, by notification direct
- entry be made in the Schedule against the architectural qualification awarded by institution
- declaring that it shall be a recognised qualification only when granted .

- ▶ For purposes of this section, "appropriate Government" means –
  - ▶ --in relation to-- any college/institution established
  - ▶ -- by an Act of Parliament/managed, controlled or financed by Central Government-- the Central Government, and
    - -- In any other case, State Government.



# Approval of the Architectural institutes

.21.) The Council may prescribe;

- minimum standards of architectural education
- required for granting recognised qualifications by colleges/ institutions in India.

▶ 22--Council may by regulations prescribe;

- ▶ -- standards of professional conduct and
- ▶ -- etiquette and
- ▶ -- a code of ethics for architects.

▶ -----

▶ Regulations made by Council

- ▶ -- may specify that its violations
- ▶ -- shall constitute infamous conduct in any professional -- professional misconduct, and
- ▶ -- such provision shall have effect
- ▶ -- notwithstanding anything contained
- ▶ -- in any law for the time being in force.

# ► Registration of Architects

# COA– Register of Architects

- ▶ Register to include particulars of each of Architect :
- ▶ full name ,
  - date of birth,
  - nationality,
  - residential address ;
  - qualification for registration,
  - date of obtaining qualification
  - authority which conferred it ;
  - date of admission to the register;
  - His professional address ;
- ▶ other particulars that may be prescribed

# Registration as Architect

- ▶ A person shall be entitled to register
  - ▶ i. on **payment of such fees**
  - ▶ ii. If he/she **resides / carries on profession of architecture in India** –  
–
  - ▶ iii **Holds a recognised qualification,**
  - ▶ iv **Does not hold such a qualification** but, has been engaged in practice as an architect for a period of not less than five years prior to notification/**Possesses qualifications as prescribed :**
    - ▶ v. **a citizen of India .**
- ▶ **Procedure for Registration--**
  - ▶ **Application for registration** to be addressed to the Registrar
  - ▶ **accompanied by fee prescribed**
  - ▶ **If Registrar is of opinion that applicant is entitled**
    - ▶ -- to have his name **entered in the register**
    - ▶ -- he **shall enter thereon the name of the applicant :**
    - ▶ --Provided that no person, whose name has been removed from the **register, shall be entitled to have his name re-entered except with the approval of the Council.**
  - ▶ --Any case of application for registration rejected by the Registrar –  
– **within three months of rejection, appeal to Council.**
  - ▶ ---Upon entry in register of a name – Registrar shall issue a **certificate of registration**

# Registration as Architect

- ▶ for **retention of a name** in the register after 31st day of December of year in which name is first entered in register,
- ▶ -- **renewal fee on annual basis** is to be paid as may be prescribed by rules
- ▶ -- **renewal fee** to be paid before the first day of April of the year .
- ▶ --Where renewal fee is not paid before the due date, Registrar shall remove name of defaulter from register :
- ▶ -- name so removed may be restored to the register on such conditions as may be prescribed by rules.
- on payment of renewal fee, the Registrar shall,, endorse the certificate of registration accordingly.
- ▶ -- on payment of prescribed fee architects entitled to have entered in register any **additional recognised qualification** .

# Registration as Architect

- ▶ Council may remove from register the name of any architect –
  - on a request for removal or
    - -- due to death
    - -- name entered in the register by error
    - -- misrepresentation /suppression of a material fact;
    - -- convicted of any offence involving moral turpitude;
    - -- adjudged by a court to be of unsound mind.
- ▶ Pass an order directing that architect whose name is removed from a register shall be ineligible for registration for a specified period .
- ▶ An order shall take effect after expiry of three months from the date of passing such order.

# Procedure For Registration with COA

- ▶ w.e.f. 01.04.2016 onward, only online filled uapplications accepted..
- ▶ **1) REGISTER AS AN APPLICANT:** register *as an Applicant* with Email id -- your login id, year of Admission other relevant details. password would be generated and sent to you by email.
- ▶ **2) FILL UP THE APPLICATION FORM:** With User ID and Password, login Council's Website, fill application form, upload your recent color photograph of size 3.5 x 3.5cm upto 10KB (max) and Signatures upto 4 KB (max).
- ▶ **3) TAKE A PRINTOUT OF FILLED FORM:** on bond A4 size paper
- ▶ **4) CORRECTIONS:** Correction(s), can be made in hard copy by countersigning at place of correction before sending to the council.
- ▶ **5) ENROLLMENT NUMBER:** Enrolment number i.e., (COA-Six digit Number) is mandatory / as applicable (for admissions from the Academic Year 2008-09 onwards)..
- ▶ **6) SEND THE FILLED FORM TO THE COA OFFICE** with Registration Fee (Non-refundable) of Rs.600/-the payment can also be made online through login id details.
- ▶ **7) SUBMIT TO CoA:** Do remember to press 'Submit to CoA' Button after making payment.

# Procedure for Registration

- ▶ **DOCUMENTS TO BE SUBMITTED ALONG WITH THE APPLICATION FOR REGISTRATION**– attested by a Gazetted Officer/ Notary Public / Oath Commissioner/ self attested.:
- ▶ **1) APPLICATION FORM:**
- ▶ **2) BIRTH CERTIFICATE:**
- ▶ **3) 10 + 2 MARK SHEET:**
- ▶ **4) ARCHITECTURAL QUALIFICATION CERTIFICATE IN ORIGINAL:**
- ▶ **5) COPIES OF MARKSHEETS FOR ALL SEMESTERS/YEARS:**
- ▶ **6) CASTE/ CATEGORY CERTIFICATE:**
- ▶ **7) DEMAND DRAFT:** A demand draft for Rs.600/– (non-refundable) drawn in favour of “Council of Architecture”, payable at Delhi/New Delhi
- ▶ **8) SELF-ADDRESSED ENVELOPE:** A self-addressed envelope of size 12”x’ 10” for sending the certificate of registration by Registered Post.
- ▶ **8) REGISTERED POST:** The original degree/diploma certificate should preferably be sent by Registered Post to avoid any loss in transit along with a self-addressed envelope large enough to contain it.

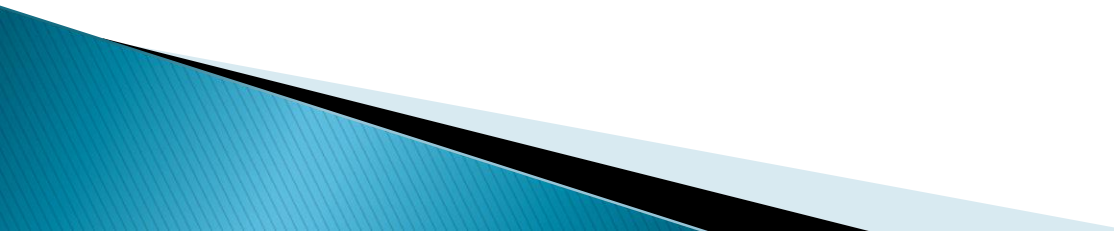
## For Office Use

# Registration and Renewal Information

S.No.	Category	Amount
1	Registration Fee	Rs. 600
2	Renewal Fee	
	a. Annual Fee	Rs. 600 per annum
	b. One-time Fee	Rs. 6,000
3	Restoration Fee	Rs. 1,000
4	Duplicate Registration Fee	Rs. 600
5	Additional Qualification Fee	Rs. 200



# **PROFESSIONAL CONDUCT, REGULATIONS, 1989**



# PROFESSIONAL CONDUCT, REGULATIONS, 1989

- ▶ To promote standard of professional conduct/ self-discipline required of an Architect,
- ▶ **Society**—quality of environment /welfare of society /economic development
- ▶ **Client** --services of a high standard, inform conditions of engagement /scale of charges, Not to sub-commission to another Architect
- ▶ **Professional conduct**—
  - ▶ no gifts/commission,
  - ▶ impartiality in administering contract,
  - ▶ integrity,
  - ▶ advancement of Architecture/ education, research/
  - ▶ compete fairly/
  - ▶ observe and uphold the Council's conditions /
  - ▶ not to supplant architects/
  - ▶ comply with COA Architectural competitions guidelines/
  - ▶ take care of employees/ associates/ consultants/
  - ▶ not to advertise/
  - ▶ when working outside country comply with their guidelines

# PROFESSIONAL CONDUCT, REGULATIONS, 1989

- ▶ ARCHITECTS (PROFESSIONAL CONDUCT) REGULATIONS, 1989 \*--To promote standard of professional conduct/ self-discipline required of an Architect, :-  
Every architect, in practice/ employment shall :-
  - ▶ i. ensure that his professional activities do not conflict with his general responsibility to contribute to the quality of the environment and future welfare of society,
  - ▶ ii. apply his skill to the creative, responsible and economic development of his country,
  - ▶ iii. provide professional services of a high standard, to the best of his ability,
  - ▶ iv. if in private practice, inform his Client of the conditions of engagement and scale of charges and agree that these conditions shall be the basis of the appointment,
  - ▶ v. Not sub-commission to another Architect or Architects the work for which he has been commissioned without prior agreement of his Client

# PROFESSIONAL CONDUCT, REGULATIONS, 1989

- ▶ vi. not give/ take discounts, commissions, gifts or other inducements for the introduction of Clients or of work,
- ▶ vii. act with fairness and impartiality when administering a building contract,
- ▶ viii. maintain a high standard of integrity,
- ▶ ix. promote the advancement of Architecture, standards of Architectural education, research, training and practice,
- ▶ x. conduct in a manner which is not derogatory to his professional character, nor likely to lessen the confidence of the public in the profession, nor bring Architects into disrepute
- ▶ xi. compete fairly with other Architects,
- ▶ xii. observe and uphold the Council's conditions of engagement and scale of charges,
- ▶ xiii. not supplant or attempt to supplant another Architect,

# PROFESSIONAL CONDUCT, REGULATIONS, 1989

- ▶ **xiv. not prepare designs in competition with other Architects for a Client without payment or for a reduced fee (except in a competition conducted in accordance with the Architectural competition guidelines approved by the Council),**
- ▶ **xv. not attempt to obtain, offer to undertake or accept a commission**
  - ▶ **--for which he knows another Architect has been selected or employed**
  - ▶ **--until he has evidence that the selection, employment or agreement has been terminated and**
  - ▶ **-- he has given the previous Architect written notice**
  - ▶ **-- that he is so doing : provided that in the preliminary stages of works, the Client may consult, in order to select the Architect, as many Architects as he wants, provided he makes payment of charges to each of the Architects so consulted,**
- ▶ **xvi. comply with Council's guidelines for Architectural competitions and inform the Council of his appointment as assessor for an Architectural competition ,**

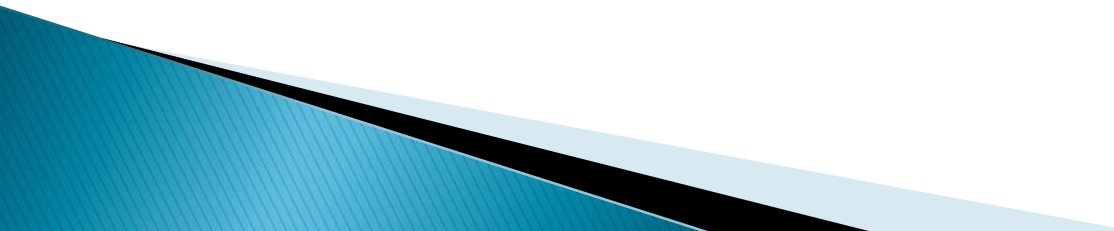
# PROFESSIONAL CONDUCT, REGULATIONS, 1989

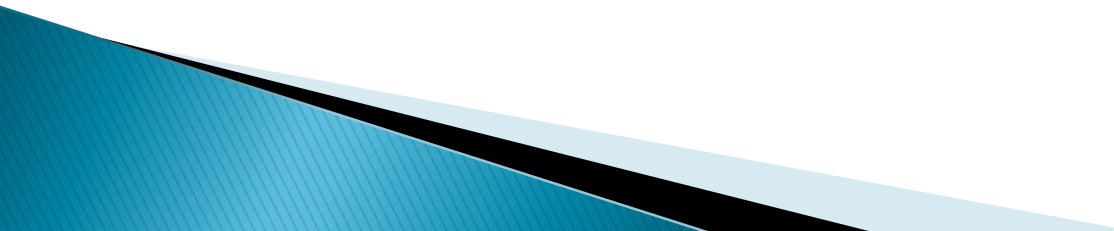
- ▶ xvii. when working in other countries,
  - ▶ --observe the requirements of codes of conduct applicable
  - ▶ --to the place where he is working ,
- ▶ xviii. not have / take as partner any person who is disqualified for registration by reason of the fact that his name has been removed form the Register ,
- ▶ xix. provide their employees with suitable working environment, compensate them fairly and facilitate their professional development
- ▶ , xx. Recognize/ respect the professional contribution of his employees,
- ▶ xxi. provide their associates with suitable working environment, compensate them fairly and facilitate their professional development
- ▶ , xxii. recognize and respect the professional contribution of his associates,
- ▶ xxiii. recognize and respect the professional contribution of the consultants,
- ▶ xxiv. enter into agreement with them defining their scope of work, responsibilities, functions, fees and mode of payment ,

# PROFESSIONAL CONDUCT, REGULATIONS

- ▶ xxv. shall not advertise his professional services nor
- ▶ shall he allow his name to be included in advertisement or
- ▶ to be used for publicity purposes save the following exceptions :–
- ▶ (a) a notice of change of address may be published on three occasions and correspondents may be informed by post,
- ▶ (b) exhibit his name outside his office /on a building, either under construction or completed, for which he is or was an Architect, provided the lettering does not exceed 10 cm. in height ,
- ▶ (c) advertisements including the name and address of an Architect may be published in connection with calling of tenders, staff requirements
- ▶ (d) allow his name associated with illustrations / descriptions of his work in press / other public media but he shall not give or accept any consideration for such appearances,
- ▶ (e) allow his name to appear in advertisements /inserted in the press by suppliers / manufacturers of materials used in a building he has designed, provided he does not accept any consideration for its use,
- ▶ (f) allow his name in brochure prepared by Clients for the purpose of advertising or promoting projects for which he has been commissioned,
- ▶ (g) produce /publish brochures, pamphlets describing his experience and capabilities for distribution to those potential Clients whom he can identify by name and position ,
- ▶ ~~\*\*~~(h) allow his name to appear in the classified columns of the trade / professional directory and/or telephone directory/ website.

# PROFESSIONAL CONDUCT, REGULATIONS, 1989

- ▶ In a partnership firm of architects,
  - ▶ -- every partner
  - ▶ -- shall ensure
  - ▶ --that such partnership firm
  - ▶ -- complies with all the defined regulations
  - ▶ Violation of any of the regulation
  - ▶ -- shall constitute
  - ▶ --a professional mis-conduct
- 

- ▶ **Conditions of Engagement  
and**
  - ▶ **Scale of Charges  
under  
the Architects (Professional  
Conduct) Regulations, 1989.**
- 

# Comprehensive Architectural Services

- ▶ Architect is required to provide following services :
- ▶ **Part I – ARCHITECTURE :**
- ▶ **1 Preparing Design Brief**—Taking Client's instructions and preparing design brief.
- ▶ **2 Site Evaluation**—impact of existing / proposed development on its immediate environs.
- ▶ **3 Design and Site development.**
- ▶ **4 Structural Design.**
- ▶ **5 Designing Public Health Services**—Sanitary, plumbing, drainage, water supply and sewerage design.
- ▶ **6 Designing Electrical Services**— Electric, electronic, communication systems .
- ▶ **7 Designing HVAC**— Heating, ventilation and air conditioning design (and other mechanical systems).
- ▶ **8 Designing Mechanical System**—Elevators, escalators, etc.
- ▶ **9 Disaster Management**— Fire protection and Security systems etc.
- ▶ **10 Periodic Inspection** — evaluation of Construction works.

# Comprehensive Architectural Services

- ▶ **ALLIED FIELDS :**
  - ▶ Landscape Architecture
  - ▶ Interior Architecture
  - ▶ Architectural Conservation
  - ▶ Retrofitting of Buildings
  - ▶ Graphic Design and Signage
- 

# Schedule of Architectural Services

Architectural services are rendered in 7 stages

**Stage 1--Concept Design**

**Stage 2—Preliminary Design & Drawings**

**Stage 3--Drawings For Client's approvals**

**-- Statutory Approvals**

**Stage 4— Working Drawings &**

**--Tender Documents**

**Stage 5— Inviting /Analysing Tenders,  
appointment of Contractors**

**Stage 6– Construction & Supervision**

**Stage 7-- Completion**

# Schedule of Architectural Services

Architect after taking instructions from Client, render following services:

- ▶ **CONCEPT DESIGN [STAGE 1] :-10%**
- ▶ --Ascertain **Client's requirements**
- ▶ -- examine **site constraints & potential**
- ▶ -- prepare a **design brief** for Client's approval.
- ▶ -- Prepare report on **site evaluation**,/ state of existing buildings, if any ;
- ▶ -- analysis **impact of existing/ proposed development** on environs.
- ▶ --Prepare drawings/ documents for Client to get done detailed **survey & soil investigation** of the site
- ▶ --Suggest measures required to **mitigate adverse impact** of the existing / proposed development on its immediate environs.
- ▶ -- **Prepare conceptual design** based on requirements
- ▶ -- prepare **rough estimate** of cost on area basis.
- ▶ .

# Schedule of Architectural Services

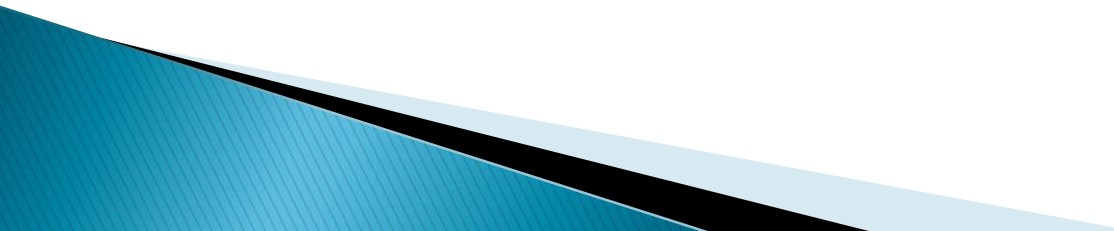
- ▶ **PRELIMINARY DESIGN AND DRAWINGS [STAGE 2] –10%:**
  - ▶ -- **Modify** conceptual designs
  - ▶ -- incorporating required changes
  - ▶ -- prepare the **preliminary drawings**/ sketches/ study model for Client's approval
  - ▶ – along with **preliminary estimate** of cost on area basis
- ▶ **DRAWINGS FOR CLIENT'S/ STATUTORY APPROVALS [STAGE 3] –15%:**
  - ▶ – Prepare **drawings** for Client's final approvals –
  - ▶ –Prepare drawings essential for statutory approvals
  - ▶ --**ensure compliance** with codes, standards and legislation,
  - ▶ -- **assist Client** in obtaining statutory approvals – if required.
- ▶ **WORKING DRAWINGS AND TENDER DOCUMENTS [STAGE 4] –10%:**
  - Prepare working drawings,
  - specifications and schedule of quantities**
  - sufficient to **prepare estimate of cost/ tender documents**
  - including mode of measurement
  - method of payments,
  - quality control procedures on materials & works
  - other conditions of contract.
- ▶ **APPOINTMENT OF CONTRACTORS [STAGE 5] :–10%**
  - ▶ -- Invite, receive and analyse tenders;
  - ▶ -- advise Client on appointment of contractors.

# Schedule of Architectural Services

- ▶ **CONSTRUCTION [STAGE 6] :-35%**
- ▶ – Prepare / issue **working drawings/ details** for proper execution of works during construction.
- ▶ -- **Approve samples** of various elements and components.
- ▶ -- Check /approve **shop drawings** submitted by contractor/ vendors.
- ▶ -- **Visit the site of work**, at intervals mutually agreed upon
- ▶ -- **inspect / evaluate** the Construction Works
- ▶ -- **where necessary clarify any decision,**
- ▶ -- **offer interpretation of drawings/specifications**
- ▶ -- **attend conferences / meetings** to ensure project proceeds in accordance with conditions of contract
- ▶ -- **keep Client informed**
- ▶ – **render advice** on actions
- ▶ -- to ensure work proceeds according to contract documents/ drawings and
- ▶ -- to exercise time and quality controls,
- ▶ -- day-to-day supervision carried out by a
- ▶ **Appointing--Construction Manager (Clerk of Works/ Site Supervisor or**
- ▶ --**Construction Management Agency** --in large / complex project
- ▶ -- to work under **guidance/ direction of Architect**
- ▶ – **paid by Client.**
- ▶ -- **Issue Certificate of Virtual Completion of works.**

# Schedule of Architectural Services

## COMPLETION [STAGE 7] :-10%

- ▶ Prepare / submit
  - ▶ --completion reports and
  - ▶ -- drawings
  - ▶ -- for project
  - ▶ -- assist the Client
  - ▶ -- in obtaining "Completion/ Occupancy Certificate"
  - ▶ -- from statutory authorities,
  - ▶ -- Issue two sets of as drawings including services and structures.
- 

- ▶ **Professional Fee**
  - ▶ **Paid**
  - ▶ **to Architects**
- 

# PROFESSIONAL FEE

- ▶ **PROFESSIONAL FEE :**
- ▶ For professional services
- ▶ -- rendered by the Architect,
- ▶ -- he shall be paid professional fee
- ▶ -- and other charges
- ▶ -- in accordance with Scale of Charges
- ▶ -- In addition, tax levied by law are to be paid
- ▶ -- such as Service tax, etc.
- ▶ -- over / above gross fees charged by the Architect
- ▶ .

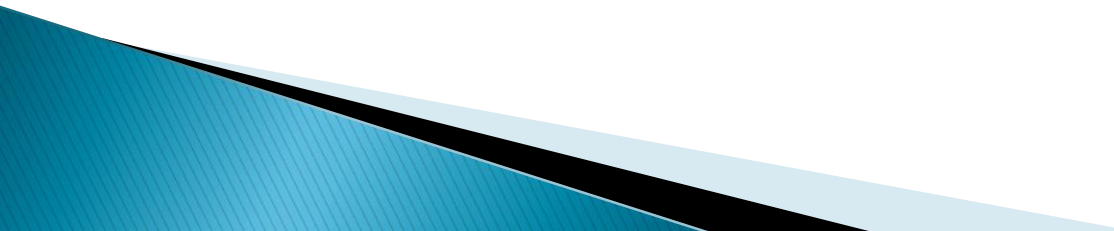
# Schedule of Payment of Fee

**Retainer Fee**– on appointment –Rs 20m or 5% of total fee payable – whichever higher

- ▶ **Stage 1–10%**– on Submission of Concept design/estimate– 10% of total fee payable –
- ▶ **Stage 2– 10%**–Submission of preliminary scheme/ estimate – 20% of total fee payable – less fee paid at S–1
- ▶ **Stage 3(1)–10%** Submission of drawings for client/statutory approval– 30% of total fee payable–less fee paid at S–1,S2
- ▶ **Stage 3(2)–5%** On client/statutory approval–35 % of total fee payable–less fee paid at S–1,S–2, S–3(1)
- ▶ **Stage 4–10%** Submission of Working drawing/specifications / tender document– 45% of total fee payable less fee paid at S–1,S–2, S–3
- ▶ **Stage 5 – 10%**–calling/receiving/analyzing/ advising on tender– 55% of total fee payable -- less fee paid up to S–4

# Schedule of Payment of Fee

**Stage 6–35%– paid a total of 90%**

- ▶ 10%– Submission of working drawings/details for starting work
  - ▶ 5%– on completion of 20% work
  - ▶ 5%– on completion of 40% work
  - ▶ 5%– on completion of 60% work
  - ▶ 5%– on completion of 80% work
  - ▶ 5%– on virtual completion work
  - ▶ **Stage 7 – 10% less retainer fee– 100 %**
  - ▶ Submission of completion report/drawings for issuance of completion/occupancy certificate and built drawings–
- 

# Schedule of Payment

<b>Retainer</b> On appointment/ Signing of Agreement/ cceptance of offer.	Rs. 20M* or 5% of the total fees payable, whichever is higher, adjustable at the last stage.
<b>Stage 1</b> On submitting conceptual designs and rough estimate of cost.	10% of the total fees payable.
<b>Stage 2</b> On submitting the required preliminary scheme for the Client's approval along with the preliminary estimate of cost.	20% of the total fees payable less payment already made at Stage 1.
<b>Stage 3</b> a. On incorporating Client's suggestions and submitting drawings for approval from the Client/ statutory authorities, if required. b. Upon Client's / statutory approval necessary for commencement of construction, wherever applicable.	30% of the total fees payable less payment already made at Stages 1 and 2. 35% of the total fees payable less payment already made at Stages1 to 3a.
<b>Stage 4</b> Upon preparation of working drawings, specifications and schedule of quantities sufficient to prepare estimate of cost and preparation of tender documents.	45% of the total fees payable less payment already made at Stages1 to 3a.
<b>Stage 5</b> On inviting, receiving and analysing tenders; advising Client on appointment of contractors.	55% of the total fees payable less payment already made at Stages 1 to 4.
<b>Stage 6</b> On submitting working drawings and details required for commencement of work at site. <ul style="list-style-type: none"> <li>On completion of 20% of the work</li> <li>On completion of 40% of the work</li> <li>On completion of 60% of the work</li> <li>On completion of 80% of the work</li> <li>On Virtual Completion</li> </ul>	65% of the total fees payable less payment already made at Stages 1 to 5. 70% of the total fees payable less payment already made at Stages 1 to 6a. 75% of the total fees payable less payment already made at Stages 1 to 6b(i). 80% of the total fees payable less payment already made at Stages 1 to 6b(ii). 85% of the total fees payable less payment already made at Stages 1 to 6b(iii). 90% of the total fees payable less payment already made at Stages 1 to 6b(iv).
<b>Stage 7</b> On submitting Completion Report and drawings for issuance of completion/ occupancy certificate by statutory authorities, wherever required and on issue of as built drawings	100% of the fees payable less payment already made at various stages and retainer.

## ➤ PAYMENT TO THE ARCHITECT

**Fee payable to Architect** -- computed on **actual cost of works** on completion.

- **Actual cost of completed works** include
- cost of assigned works
  - cost of equipment & machinery -- Transformers, DG Sets, Sub-stations, Lifts, Air Conditioning Machines, Pumps & Motors, Water and Sewage Treatment Plant, etc.,
  - excluding the cost of land

•**Payment** computed on following basis:

**Retainer : On rough estimate of cost.**

**Stage 1 : On rough estimate of cost.**

**Stages 2 to 4 : On preliminary estimate of cost.**

**Stages 5 to 6b : Accepted tender cost.**

**Stage 7 : Actual total cost.**

Progressive, payments made to Architect -- based on work done during that stage/ mutually agreed

No deductions made -- on account of penalty, liquidated damages, withheld /recovered from contractors/ suppliers.

# Additional Payment to Architect

- ▶ **DOCUMENTATION AND COMMUNICATION CHARGES :**
- ▶ Apart from professional fee
- ▶ -- Client to pay
- ▶ Documentation / Communication charges
- ▶ @ 10% of professional fee payable to Architect at all stages.

## **REIMBURSABLE EXPENSES :**

- ▶ -- amounts reimbursed against site visits
- ▶ Actual cost of travel (to & fro)
- ▶ Boarding/ lodging/ local transport
- ▶ for visit made by his staff
- ▶ – to the site/ places connected with execution of work
- ▶ -- connected with performance of duties referred in agreement.
- ▶ -- Cost of presentation models, computer simulation, presentation drawings, etc., when asked by Client for purposes other than Design/ execution of project.

# Architecture and related Professions

- ▶ **Architecture**-- is primarily art / science of designing spaces --for serving multifarious activities of human beings and-- for meeting their specific needs in a meaningful built environment.
- ▶ **Structural Design**-- is to evolve a strong, durable and an efficient skeleton --so that the space which architecture encloses, and form in which it expresses itself as interior content and an exterior container, becomes an organic extension of one another
- ▶ **Urban Design**--- is architecture of cities, highly complex and gargantuan in scale. The primary aim of urban design is to imbibe and maintain a sense of identity and harmony among buildings, open spaces and other structures by means of a pleasant and memorable visual imagery throughout the length and breadth of an urban setting.
- ▶ **Landscape Architecture**-- deals with the analysis, planning, design, management, preservation and rehabilitation of land and also determines the environmental impact. It is a science capable of objective analysis and synthesis leading to an ecologically-sensitive design, which is self-sustainable.
- ▶ **Interior Architecture**-- primary objective is to generate a purposeful ambience such as would stimulate the user's creative potential through multifarious activities
- ▶ **Architecture Design** ---essentially is a product of an individual mind but realized through association of experts from allied fields who contribute in the process of construction

# Scale of Charged

Type of Project/ Services	Scope of Work & Services	Minimum fees/Reimbursable expenses
<b>1. Comprehensive Architectural Services</b>	As described for Comprehensive Architectural Services in the Conditions of Engagement including Site Development but excluding Landscape Architecture, Interior Architecture, Graphic Design and Signage.	<ol style="list-style-type: none"> <li>1. Single Block Housing and sites upto 0.5 hectare : 5 Percent on the cost of works assigned.</li> <li>2. For a site more than 0.5 hectare and upto 2.5 hectares: 3.5 Percent on the cost of works assigned.</li> <li>3. For a site more than 2.5 hectares and upto 5 hectares : 2.5 Percent on the cost of works assigned.</li> <li>4. For a site more than 5 hectares : 2 Percent on the cost of works assigned.</li> <li>5. Individual House : 7.5 Percent on the cost of works assigned.</li> </ol> <p>Note : The fees payable in marginal cases in respect of clauses (iii) to (v) shall not be less than the maximum fee payable in their respective preceding clauses.</p>
<b>1.2 All projects other than housing</b>	As described for Comprehensive Architectural Services in the Conditions of Engagement including Site Development but excluding Landscape Architecture, Interior Architecture, Graphic Design and Signage.	5 Percent on the cost of works assigned.

<b>1.2.1 Repetition of the building in the same campus</b>	As described for Comprehensive Architectural Services in the Conditions of Engagement including Site Development but excluding Landscape Architecture, Interior Architecture, Graphic Design and Signage.	5 Percent on the cost of works assigned.
<b>1.2.2 Repetition of the building in the same campus</b>	As described for Comprehensive Architectural Services in the Conditions of Engagement except Landscape Architecture, Interior Architecture, Graphic Design & Signage and Site Development.	2.5 percent on the cost of works assigned
<b>1.2.3 Repetition of the building at a different site</b>	As described for Comprehensive Architectural Services in the Conditions of Engagement except Landscape Architecture, Interior Architecture, Graphic Design & Signage and Site Development.	3.5 percent on the cost of works assigned.
<b>1.3 Site Development [except 1.1 and 1.2]</b>	As described for Comprehensive Architectural Services in the Conditions of Engagement except Landscape Architecture, Interior Architecture, Graphic Design and Signage [except 1.1 and 1.2].	2.5 Percent on the cost of works assigned.
<b>1.4 Architectural Conservation/ Retrofitting/Additions and alterations</b>	As described for Comprehensive Architectural Services in the Conditions of Engagement except Landscape Architecture, Interior Architecture, Graphic Design and Signage.	7.5 Percent on the cost of works as

## 2. Urban Design

As described for Urban Design/ Urban Renewal in the Conditions of Engagement.

- For all projects except Housing: 1 percent on the cost of works assigned, to be computed at a rate of Rs 6M per Sq.mt. of proposed built-up area.
- Housing Projects : 20 percent of the fee payable for housing, as stated in sub-clause 1.1 above, on the cost of works assigned, to be computed at a rate of Rs 6M per Sq.mt. of proposed built-up area.
- In case of Urban Renewal projects fee payable shall be 1.5 times of the fee stated above based on actual cost of works assigned.

Above fees are subject to a minimum of Rupees 240M.

## 3. Interior Architecture/Graphic design and signage

As described for Interior Architecture in the Conditions of Engagement.

7.5 percent on the cost of works assigned

<b>4. Landscape Architecture</b>	As described for Landscape Architecture in the Conditions of Engagement.	7.5 percent on the cost of works assigned
<b>5. Site visits</b>	<p>Visits by an Architect/consultant in connection with Project for which commissioned.</p> <ul style="list-style-type: none"> <li>Outstation Visit : <ul style="list-style-type: none"> <li>Traveling, Boarding &amp; Lodging Expenses</li> <li>Rs. 3M</li> <li>Rs. 1M</li> <li>For each day</li> </ul> </li> <li>Local site visit/field visit</li> </ul>	<p>Actual Air/ AC First Class Fare (to &amp; fro), AC Car, Boarding &amp; Lodging Expenses and Local Transport.</p>
<b>6. Advisory Consultancy</b>	<ul style="list-style-type: none"> <li>Outstation</li> <li>Local</li> </ul>	<p>All as above at 5 i) (a) plus Rs. 10M per day or part thereof.</p> <p>Rs. 4M per day or part thereof.</p>
<b>7. Documentation and Communication Charges</b>	Applicable on all professional fee payable to the Architect.	10 percent of the professional fees.
<b>8. Verification and Certification of Contractor's Bills</b>	<p>Verification of Contractor's bills for payment, based on progress of works at site, measurements of works Certified by the Construction Manager (i.e. Clerk of Works/ Site Supervisor or Construction Management Agency) and in accordance with Conditions of Contract, Drawings and instruction issued.</p>	1 percent in addition to above fees.

# Scale of Charges

- ▶ Explanatory Notes:
- ▶ 1. For works costing up to Rs. 1 400 M
- ▶ professional fees may be negotiable
- ▶ between Architect and Client.
- ▶ 2. When Architect is engaged
- ▶ --to undertake Comprehensive Architectural Services
- ▶ – in respect of buildings/ Site Development and/ or Landscape Architectural Services
- ▶ --as a follow up of an Urban Design/ Urban Renewal Scheme,
- ▶ –his professional fee
- ▶ -- for Comprehensive Architectural Services/ Landscape Architectural Services
- ▶ --shall be reduced by 20%.
- ▶ --The current value of M is 1 000.

# ▶ **CLIENT'S ROLE AND RESPONSIBILITIES**

:

# CLIENT'S ROLE AND RESPONSIBILITIES

Client to discharge following obligations connected with project / engagement of the Architect :

- ▶ 1 Provide detailed requirements of the project.
- ▶ 2 Provide property lease/ ownership documents.
- ▶ 3 Provide a:
  - ▶ -- site plan, to a suitable scale,
  - ▶ -- showing boundaries, contours at suitable intervals,
  - ▶ --existing physical features
  - ▶ -- existing roads, paths,
  - ▶ -- trees, existing structures,
  - ▶ -- existing service and utility lines and
  - ▶ -- such lines to which proposed service can be connected
  - ▶ -- If information not readily available,
  - ▶ -- Client to arrange for survey/ collection of necessary information and pay for same.
- ▶ 4 To furnish reports on—
  - ▶ soil conditions/ test as required by Architect or
  - ▶ -- pay for the preparation of the same.

# CLIENT'S ROLE AND RESPONSIBILITIES

- ▶ 5 Statutory stipulations/ Codes of Practice/Schedule of rates, etc., to be followed.
- ▶ 6 Pay fees, levies, security deposits and expenses for statutory sanction.
- ▶ 7 Follow professional advice of Architect – make no changes in drawings and
  - ▶ --documents without consent of Architect.
- ▶ 8 Honour Architect's bills within one month of submission.
- ▶ 9 Appoint
  - ▶ -- Construction Manager (Clerk of Works/ Site Supervisor or
  - ▶ --Construction Management Agency
  - ▶ --in case of a large and complex project)
  - ▶ as per the Architect's advice.

# **ARCHITECT'S ROLE AND RESPONSIBILITIES**

:



# . EXECUTION OF THE ASSIGNMENT –

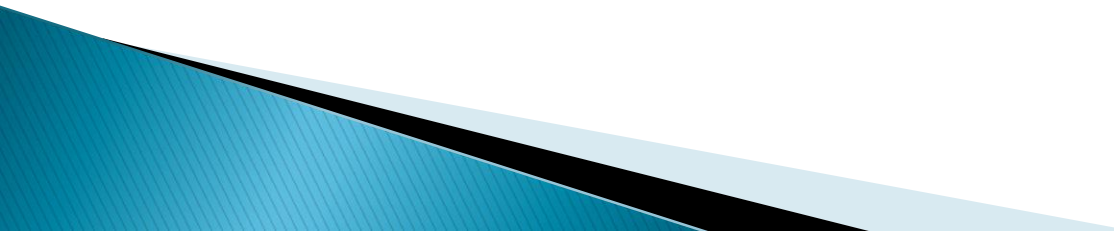
## Architect Role and Responsibility

- ▶ 1 Architect to keep Client informed about progress of work .
- ▶ 2 Architect to **appoint specialised consultants in consultation with Client**, when necessary.
- ▶ 3 Architect **responsible for direction/ integration of consultants work.**
- ▶ **Consultants responsible for calculations/ detailed design / periodic inspection/ evaluation of work entrusted .**
- ▶ 4 Architect to advise Client on
  - ▶ -- **Time Schedule (Bar Chart/PERT/ CPM Network)** prepared by contractors for completion of work.
- ▶ 5 Architect to supply to Client, free of cost, upto **six sets of drawings at different stages.**
- ▶ 6 Architect not to make
  - ▶ -- **deviations/alterations/ omissions**
  - ▶ -- from approved drawings,
  - ▶ -- involving financial implications without prior consent of the Client.

# . EXECUTION OF THE ASSIGNMENT

- ▶ **7 Additional professional services** rendered by Architect after project completion period --**compensated** on mutually agreed terms.
- ▶ **8 Architect to exercise all:**
  - reasonable skill, care and diligence
  - exercise superintendence / inspection
  - -- to ensure works executed
  - -- in accordance with Conditions of Contract.
- ▶ **9 Any revision in drawings/ tenders / documents**, once approved, required by Client
  - ▶ -- compensated as additional services by Architect and
  - ▶ -- **paid for @ 50% of the fee prescribed for the relevant stage(s).**
- ▶ **10 No change made in approved drawings / specifications** at site without consent of Architect.
- ▶ **11 Any curtailment of professional services**, beyond Stage 2
  - ▶ -- client to pay at least 20% of fee
  - ▶ -- for remaining Stage(s) of curtailed work/ Services.

# Time Schedule

- ▶ **TIME SCHEDULE :**
  - ▶ Architect in consultation with the Client, prepare:
    - ▶ -- a Time Schedule
    - ▶ -- in respect of various services
    - ▶ --to be rendered and
    - ▶ -- discharge of Client's obligations.
- 

# INDEMNIFICATION

:In the event a

- ▶ -- claim / suit is brought
- ▶ -- against Architect/ Consultants
- ▶ -- by any third party
- ▶ -- for damages
- ▶ -- arising from personal injury
- ▶ -- or property damage
- ▶ -- caused wholly by Client, or
- ▶ -- anyone employed by Client, or
- ▶ -- anyone for whose acts Client held responsible,
- ▶ -- then Client shall indemnify Architect and
- ▶ -- fully reimburse any loss/ damage / expenses,
- ▶ including attorney's fees,
- ▶ which Architect may incur

# OWNERSHIP OF COPYRIGHT

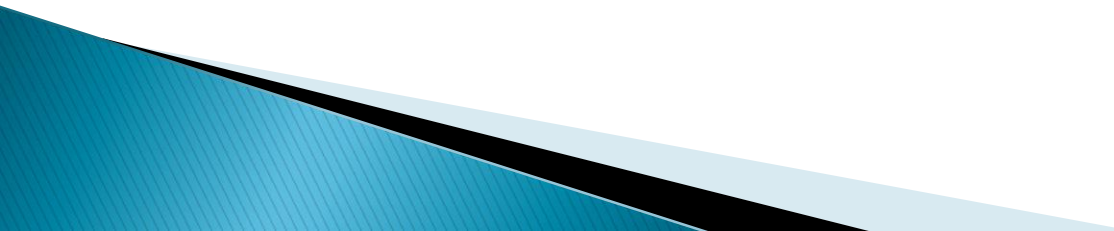
- ▶ **Architectural design --an intellectual property of Architect.**
- ▶ **-- Drawings, Specifications, Documents and models -- also property of Architect**
- ▶ **-- whether project, for which made, executed or not.**
- ▶ **-- Client may retain copies of Architect's models, drawings, specifications; other documents for information and use in connection with project.**
- ▶ **-- But not used for other project by Client / any other person, except for repetition as stipulated in Scale of Charges.**

# TERMINATION OF AGREEMENT :

- ▶ 1 Agreement between Architect / Client may be terminated :
  - ▶ --by either one
  - ▶ -- giving other a written notice
  - ▶ -- of not less than 30 (thirty) days,
  - ▶ -- should either fail substantially to perform his part of responsibilities/duties,
  - ▶ -- so long as the failure not caused by one initiating termination.
- ▶ 2 When termination of Agreement
  - ▶ -- not related to-- omission/ neglect / default of Architect
  - ▶ -- Architect entitled to professional fees
- ▶ 3 When Architect's firm closing its business
  - ▶ -- or Client having terminated agreement
  - ▶ -- Client have right to
  - ▶ -- employ another Architect
  - ▶ -- to complete work,
  - ▶ -- after making payment
  - ▶ -- to previous architect's firm.

# INTERPRETATION : :

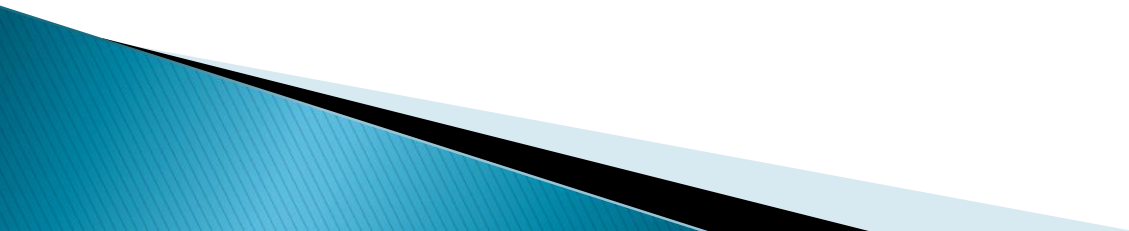
In case of

- any ambiguity or
  - -- difficulty
  - -- in interpretation of
  - -- Conditions of Engagement and
  - -- Scale of Charges,
  - -- interpretation of
  - -- Council of Architecture
  - -- shall be final and binding
  - -- on Architect and Client.
- 

# ARBITRATION :

- ▶ **All disputes / differences**
  - **between Client and Architect**
  - ▶ -- **under "Conditions of Engagement and**
  - ▶ -- **Scale of Charges"**
  - ▶ -- **with regard to the**
  - ▶ -- **meaning / interpretation or**
  - ▶ -- **matter / things done / to be done**
  - ▶ -- **such disputes / differences**
  - ▶ -- **referred for arbitration**
  - ▶ -- **to Council of Architecture.**
- **Arbitrator appointed by**
- **President, Council of Architecture.**
- **Arbitration conducted as per the provisions of the Arbitration and Conciliation Act, 1996.**
- **Decision / award of Arbitrator -- final and binding on Architect / Client.**

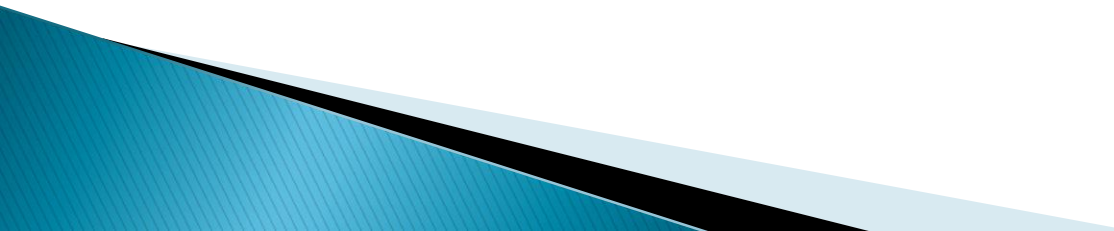
# ▶ Architectural Competition Guidelines



# Architectural Competitions– Genaral

- ▶ Competition part of human history and culture to locate the best possible options
- ▶ --Create great public interest,
- ▶ -- leads to discovery of new talent
- ▶ – Discovery of best designs
- ▶ The Council of Architecture Competition Guidelines;
- ▶ --provides code that
- ▶ --safeguards interests of promoters/ architects,
- ▶ -- helps clients to make choice of an architect
- ▶ – Provides client with number of solutions to choose
- ▶ -- minimises cost to Client
- ▶ --Architects prohibited to compete against each other without charging a fee
- ▶ – in an open architectural competition they are allowed to do so

# Architectural Competitions– General

- ▶ **Offers opportunity to Architects**
  - ▶ -- to compete in projects of national importance
  - ▶ – to prove their talent and ability.
  - ▶ -- provide opportunity for research/ study of a new building type,
  - ▶ -- exploring possibilities of new technical ideas and
  - ▶ -- for gaining new experience.
- 

# Architectural Competitions– General

- ▶ **For the promoter** advantages are
  - ▶ -- competition may cost more than commissioning an architect privately and
  - ▶ -- also takes a little more time.
  - ▶ -- But balanced by numerous choice of
  - ▶ -- best with variety of approaches.
    - a wide range of ideas /concepts
  - ▶ -- selecting design which fits into his requirements.
  - ▶ – Explores hidden talents among younger Architects
    - explores talents of those competing in architectural challenge,
    - possibility of having outstanding design.
    - take pride in finding best architect

# Architectural Competitions– Guidelines

- ▶ **Competition Guidelines by Council of Architecture–**
- ▶ -- protect and safeguards
- ▶ -- interests of both Promoter and Competitors.
- ▶ -- While ensuring
- ▶ -- promoter a design of high standard
- ▶ – competitors compete on same conditions/ within same limitations– providing level playing field

## **Purpose of Guidelines is to:**

- detail out architectural competitions system,
- help client to make up his mind whether competition right answer to his architectural problem,
- what kind of competition to be suitable.
- how competitions to be organised and
- to make promoter understand responsibilities and liabilities .

# Purpose

- ▶ **Purpose of Competition Guidelines laid down by COA is to detail out terms and conditions which will ensure--**
  - ▶ -- each competitor competes on similar conditions/ limitations.
  - ▶ -- entries judged only by qualified professionals
  - ▶ -- capable of interpreting competitors' presentations--
  - ▶ --meeting promoter's requirements..
  - ▶ --Appointment of Assessors -- first step for a competition.
  - ▶ -- Appointment of Technical Advisors-- qualification, role and responsibilities
    - ▶ -- define the qualification of Assessors
    - ▶ -- define the Role of Assessors
    - ▶ -- Preparation of the project brief
    - ▶ -- Manner in which competition to be conducted-- Finalising competition conditions.
    - ▶ -- Prepare final report/award.
    - ▶ --Prizes to be paid
    - ▶ --Remuneration to be paid to Assessors
    - ▶ -- Liabilities and Responsibilities of Promoter



# **ELIGIBILITY TO COMPETE**

# ELIGIBILITY TO COMPETE:

- ▶ Participation in all competitions shall be open to:
- ▶ **Architects** -- registered with the COA under the Architects Act, 1972 --on the date of announcement of competition and thereafter.
- ▶ **Firms**-- in which all the partners shall be registered with the Council of Architecture under the Architects Act, 1972 on the date of announcement of the competition and thereafter.<sup>1</sup>
- ▶ **Students of a Teaching Institution**-- recognised by the COA-- provided no staff member of institution is sole Assessor ---
- ▶ --or in a jury of three or more Assessors, only one Assessor is from the staff of the said institution.
- ▶ -- Promoter/ Assessor/s /their associate, partner/ employee shall not compete/ assist a competitor / act as architect/ joint architect for competition project.

# ▶ Registration Procedure

# Registration Procedure

- ▶ Competitors when asked to pay substantial registration fees
- ▶ should know when registered under what conditions registration fee will be refunded.
- ▶ Intending competitors must receive sufficient information
- ▶ when invited to apply for competition conditions
- ▶ to enable them to judge
- ▶ whether competition falls within guidelines for architectural competition of COA and
- ▶ whether they are capable of tackling problem set by the competition.

# Registration Procedure

- ▶ The Council of Architecture recommends 3 parts Procedure:
- ▶ **PART I**
- ▶ A leaflet / advertisement should include following information:
- ▶ Name of the Promoter
- ▶ Purpose and nature of the competition—ideas/ single or 2 stage competition
- ▶ material competitor would submit.
- ▶ The prizes (or honoraria)
- ▶ Names of Assessors
- ▶ Persons eligible to compete
- ▶ Approximate time table
- ▶ Procedure for registration,
- ▶ Last date for registration and
- ▶ Date by which competition conditions would be made available by promoter.

# Registration Procedure

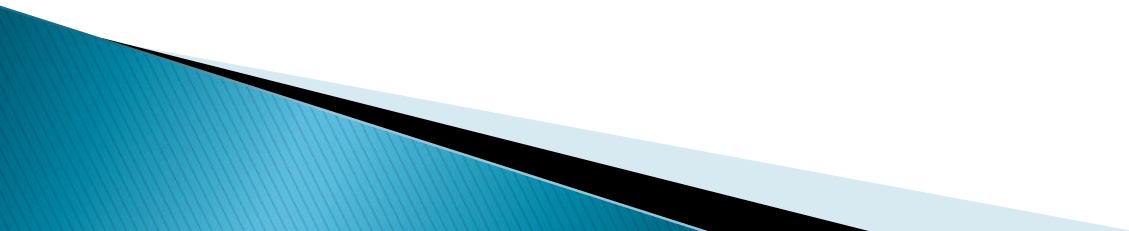
## ▶ PART II

- ▶ An intending competitor makes an application for registration form,
- ▶ completes registration form
- ▶ sends by registered post within the time stipulated
- ▶ to promoter with registration fee (if any).
- ▶ Registration complete when promoter accepts competitor's eligibility by placing his name on the competition register and
- ▶ informs him in writing

## ▶ PART III

- ▶ The competition condition sent to competitors
- ▶ when his eligibility is established and
- ▶ his name is entered in the competition register.

# TYPES OF COMPETITIONS



# Type of Competitions

## Three types of competitions—

- ▶ **i Project Competition**
  - ▶ – to find best solution for actual building project
  - ▶ -- to appoint winner to carry out commission
- ▶ **ii Idea Competition**
  - ▶ --to get ideas about
  - ▶ -- certain aspects of architectural/ town planning issues.
  - ▶ -- winner may not be commissioned to carry out project,
  - ▶ --students of architecture may participate when permitted by promoter
- ▶ **iii Combination of both– Project and idea**



# ▶ **CLASSIFICATION OF COMPETITIONS**

# CLASSIFICATION OF COMPETITIONS

Three options of holding Competitions

## (I) OPEN COMPETITIONS

- Competitions where all Architects invited to participate
- through announcement by advertisements
- in suitable media/ through circulars
- which may be issued by the promoters.
- for projects costing less than Rs. 10,00,000/ may be limited to Architects having office in State of the project site.
- Participants are not paid

## ii) Limited Competition– Competition by Invitation

- ▶ --Competitions limited to Architects
- ▶ -- approx. 5 to 8
- ▶ -- selected by promoter
- ▶ -- on advice of Senior Architect Assessor / Board of Assessors,
- ▶ -- Each participant submitting designs shall receive honorarium.

## ▶ (III) SPECIAL COMPETITIONS

- for projects involving
- ▶ -- town planning and
- ▶ -- design problem or
- ▶ -- use of industrial components
- ▶ --or participation of developers.
- ▶ -- participation may be limited to professionals/ group of professionals -----with definite expertise.
- ▶ -- competition announcement to clearly define field of expertise.

# ► ORGANISATION OF COMPETITIONS

# COMPETITION ORGANISATION

- ▶ Competitions may be organised in one or two stages.
- ▶ -- **Single Stage Competition**
- ▶ -- **Two Stage Competition**
- ▶ (I) **SINGLE STAGE COMPETITION**
  - In single stage competition
  - ▶ -- competition entries
  - ▶ -- shall be fairly complete drawings
  - ▶ -- plans, section, elevations, etc.
  - ▶ -- to a suitable scale
  - ▶ -- sufficient to explain scheme set out in competition
  - ▶ -- designs submitted
  - ▶ -- assessed by the Assessors
  - ▶ -- for award of prizes and
  - ▶ -- appointment of architect.
  - ▶ -- Such competitions recommended for small & simple project.

# COMPETITION ORGANISATION

## ▶ II) TWO STAGE COMPETITIONS

### ▶ STAGE ONE--

- ▶ -- first stage is for soliciting ideas
- ▶ -- competition entries limited to planning
- ▶ --on broad basis and
- ▶ -- drawings to a suitable scale
- ▶ --sufficient to indicate the intention/idea of competitor.
- ▶ --Designs submitted assessed by the Assessors
- ▶ -- for selecting a small number of competitors (between 5 and 10)
- ▶ -- selected designs invited to take part in the second stage of the competition,
- ▶ -- each invited architect paid a specified sum.
- ▶ ---to maintain anonymity , each competitor informed individually
- ▶ --whether or not invited to participate in the second stage.
- ▶ -- Correspondence --responsibility of Promoter / Professional Adviser, if appointed
- ▶ --. to ensure names of invited / rejected not revealed to assessor
- ▶ --After end of the first stage
- ▶ -- Board of Assessors, if necessary / with approval of the Promoter
- ▶ -- clarify points in competition conditions
- ▶ -- for benefit of second stage competitors

# COMPETITION ORGANISATION

## ▶ STAGE TWO

- ▶ -- Period between Assessors award for the first stage and submission of designs for the second stage not to exceed six months.
- ▶ -- In exceptional circumstances period may be extended.
- ▶ -- Second stage competition may be limited
- ▶ -- to only a part of subject dealt in first stage.
- ▶ -- Members of Board of Assessors shall be same
- ▶ -- for first stage / second stage
- ▶ -- Designs submitted
- ▶ -- for both first/ second stage
- ▶ -- shall be exhibited and/or published
- ▶ -- only after final award of the second stage competition.
- ▶ -- If any design selected for second stage published/ exhibited before final award of second stage declared, it will be disqualified.
- ▶ -- Two stage competitions recommended
- ▶ -- for town planning and for large scale / complex project.

# COMPETITION ORGANISATION

- ▶ **III. REGIONAL SPECIAL CATEGORY COMPETITIONS**
- ▶ --This type of competition
- ▶ -- intended for small projects
- ▶ -- of charitable organisations
- ▶ -- in which four to six local firms
- ▶ --compete for the appointment
- ▶ -- as the Architect.
- ▶ --No premiums are given and
- ▶ -- the winner appointed to carry out the project.



- ▶ **ADVISORS–**
  - ▶ **Technical**
  - ▶ **Professional**
- 

# Appointment of Advisors

Advisers

## (I) TECHNICAL ADVISER

- ▶ – Where necessary promoter in consultation with Assessor/Board of Assessors appoint
  - ▶ -- one / more technical advisers
  - ▶ -- to assist in preparation of brief for competition project and
  - ▶ -- to advise Board of Assessors on competition design entries.
  - ▶ ---advise limited to his expertise with no voting rights.

## (II) PROFESSIONAL ADVISER

- ▶ For two stage competition--Professional Adviser appointed ( Architect registered with COA ).
  - ▶ – He will not be connected with Board of Assessors / attend any of its meetings.
  - ▶ Professional Adviser responsible to maintain the anonymity of each competitor/
  - ▶ On completion of first stage of competition
    - ▶ --sealed envelopes containing names of the competitors opened only by Promoter or Professional Adviser without disclosing names to anyone
    - ▶ -- inform each competitor individually whether invited or not for second stage.
    - ▶ -- All envelopes resealed by Professional Adviser/Promoter till final award.
    - ▶ --If after first stage, Assessors wish to clarify / amplify any aspect of competition project it shall be conveyed to competitors only by Professional Adviser/Promoter.

# ► Conditions for conducting architectural competitions

# Conditions of the competitions

## Conditions of competitions shall clearly give::

- Conditions based on guidelines of COA.
- Type of Competition.
- Purpose of competition
- intentions of the promoter.
- Nature of problem to be solved.
  - practical / mandatory requirements to be met by competitors.
- Number, nature, scale and dimensions of documents, plan and/or models.
- Estimates if required in standard form, issued with conditions.
- Nature of prizes.
- Names of Assessors.
  - Necessary information required for conducting the competition.
- Competition conducted in English.
- All competition designs submitted anonymously.

# Conducting Architectural Competition

- ▶ Contractual Obligation
- ▶ General Conditions
- ▶ Prize Money and Honoraria
- ▶ Anonymity
- ▶ Copyright and Right of Ownership
- ▶ Insurance
- ▶ Competition Time table
- ▶ Cost Estimates
- ▶ Termination of Competition
- ▶ Appointment of Architect
- ▶ Exhibition of Entries
- ▶ Return of Design Drawings

# 1. Contractual Obligation

- Competition conditions / schedule of requirement primary importance for success of competition– needs to be given sufficient time
- ▶ **1. CONTRACTUAL OBLIGATION**
- ▶ Publication of competition constitutes an offer of a contract by the promoter,
- ▶ submission of design for competition, the competitor accepts this contract.
- ▶ The competition conditions /reply to competitor's questions –
- ▶ –constitute legal basis for contract
- ▶ – legally binding on promoter and competitors.

## 2. General Conditions

- ▶ Project brief /conditions of competition approved by Senior Architect Assessor & Board of Assessors before publication/ issue to competitors.
- ▶ Conditions / requirement of competition to be identical
  - ▶ – Copy filed with COA with answers to questions
- ▶ Conditions to indicate mandatory/free for interpretation
- ▶ Information to be specific/not open to misinterpretation.
- ▶ Supplementary information sent to all competitors .
- ▶ Conditions to indicate promoter's priorities--functional aspects, economy of construction / in use, solution to technical or circulation problems etc).
- ▶ Exact use of winning design.
- ▶ Designs not be put to any other use / altered except by agreement with author

# 2 General Conditions

- ▶ Any amount remitted by applicants for 'Conditions of the Competition', --Fully refunded in case of decision not to compete /return the "Conditions of the Competition" within four weeks prior to submission of design.
- ▶ Submission of design means --acceptance by competitor of conditions of competition.
- ▶ Each design accompanied by a declaration that
  - ▶ --design is bonafide work
  - ▶ -- drawings prepared under his supervision
  - ▶ -- accept award of the Assessors as final and binding.
- ▶ In case two / more architects compete -- a partnership deed to be created for carrying project in case of winning the competition.
- ▶ Board of Assessors:
  - ▶ -- must make awards
  - ▶ --which shall be final / binding
  - ▶ -- made public by a date stated in conditions.
  - ▶ -- at its discretion adopt "promoters' choice".
  - ▶ -- select not more than three designs which are of equal merit
  - ▶ -- selection of winning design could be made by promoter after discussing with authors of selected designs their respective entries.

# 3. PRIZE MONEY & HONORARIA

- ▶ Condition for competition must state:
  - ▶ -- number of prizes and
  - ▶ -- amount of each prize money.
  - ▶ -- Prize money related to the size of project,
  - ▶ -- amount of work involved and expenses incurred for preparation for competition.
  - ▶ -- In Ideas competition where subsequently work carried out by official bodies-- prize money to be adequate to compensate competitors for ideas
  - ▶ --Promoter to accept decision of Board of Assessors
  - ▶ -- pay prize monies within one month of announcement of results.
- ▶ --Each participant in a limited competition/ invitation two stage competition to receive an honorarium.
- ▶ -- Amount reimbursed for two stage competition for additional work carried out in second stage stated in conditions for competition.

## Prizes and honoraria

Award	Project upto built up area 5000 sq.m(Rs.)	Project with built up area above 5000 sq.m and upto 10000 sq. (Rs.)	Project with built up area above 10000 sq.m and upto 250000 sq.m(Rs.)	Project with built up area above 25000 sq.m(Rs.)
<b>1. OPEN COMPETITION</b>				
i. First prize (To be adjusted in professional fees)	125M	250 M	500 M	1000M
ii. Second prize	75 M	150 M	300 M	600 M
iii. Third prize	50 M	100 M	200 M	400 M
iv. Merit prizes upto 5 each	10 M each	20 M each	40 M each	80 M
<b>2. LIMITED COMPETITION</b>				
Minimum honoraria to be paid to each competitor	50 M	100 M	200 M	300 M

Note : The current value of M is 1000

## Cost of conducting Architectural Competitions

Description	Project with built-up area upto 10,000 Sq.m( Rs.)	Project with built-up area above 10,000 Sq.m.( Rs.)
I. Assessors' Fee	Pre-assessment 10 M and assessment 10 M per day or part thereof.	Pre-assessment 10 M and assessment 10 M per day or part thereof.
II. Professional Advisor/ Project Coordinator's Fee	100 M	200 M
III. Contingent Expenditure	As per estimate*	As per estimate*

**Note 1:** For a two stage competition, the above fees for Professional Advisor/Project Coordinator be increased by 50%.

**Note 2:** For a two stage competition, the above fees for Professional Advisor/Project Coordinator be increased by 50%.

### \* Sub-heads for contingent expenditure :

1. Land Survey.
2. Photographs of site.
3. Printing of Brochure.
4. Advertisement.
5. Communication Expenses.
6. Administrative and Legal Expenses.
7. Exhibition.
8. Publication of competition/select entries.
9. Contingent travel, conveyance, boarding, lodging etc. for Professional Advisor / Project Coordinator, Assessors and others.
10. Other incidental expenses.

# 4. ANONYMITY, 5 Copyright

## 4. ANONYMITY

- ▶ Anonymity of competitors maintained till final award of Board of Assessors .
- ▶ No competitor shall terminate his anonymity till the final award.
- ▶ Anonymity of each competitor guaranteed by adopting suitable measures

## ▶ 5. COPYRIGHT & RIGHT OF OWNERSHIP

- ▶ Each competitor shall retain copyright for competition design.
- ▶ Design awarded first prize only used upon commissioning author of design to render professional services to carry out project.
- ▶ No other design shall be used wholly/ in part by promoter.
- ▶ Promoter's right on design awarded the first prize/ designs selected-- covers one execution only.
- ▶ Competition conditions , may provide for repetitive work and specify terms thereof.
- ▶ Each competitor shall retain right of reproduction of his design

# 6. INSURANCE, 7– Time Table

## 6. INSURANCE

- ▶ Promoter to insure for damage /loss by fire/floods/any other reason
- ▶ --Competitor's design drawings
- ▶ --submitted in competition
- ▶ -- when he assumes responsibility for them
- ▶ --and for duration of his responsibility
- ▶ -- for loss during transit when drawings returned to competitor.
- ▶ --Amount of insurance stated in competition conditions.

## ▶ 7. COMPETITION TIME TABLE

- ▶ Notice of competition shall clearly indicate :
  - ▶ -- last date for application for the competition conditions
  - ▶ -- last date for submission of the design drawings.
  - ▶ --Last date for submission of questions.
  - ▶ --Approximate date when the answers to the questions will be sent to the competitors.
  - ▶ -- final date for despatch of entries by the competitors and receipt by promoter.
  - ▶ --Sufficient time given for transport,
  - ▶ --particularly for open competitions where competitors will be from all over the country.
  - ▶ --Interval between date of despatch & date of delivery should be between five and ten days.

# 7– Time Table

- ▶ Competition time table under no circumstances be shortened.
- ▶ The Board of Assessors to decide upon:
  - ▶ -- judging dates at early stage of the competition
  - ▶ -- date of announcement of awards
  - ▶ -- included in conditions of competition.
- ▶ In case of two stage competitions
  - ▶ -- conditions of competition indicate dates for first stage only.
  - ▶ --All dates of second stage to form part of conditions of reference to second stage.
- ▶ In unavoidable delay in judging—
  - ▶ -- a new date fixed by Board of Assessors
  - ▶ -- confirmed by all members and
  - ▶ -- publicly announced

# 8. COST ESTIMATES, 9. TERMINATION OF THE COMPETITION

## ▶ 8. COST ESTIMATES

- Competitors may be required
- to submit cost estimate of their design
- on areas / volume basis.
- Cost estimate shall not be a determining factor in Assessors' decision except where cost limits are rigidly imposed and
- stated in competition conditions.

## ▶ 9. TERMINATION OF THE COMPETITION

- ▶ Promoter may terminate competition if:
  - ▶ – in opinion of Board of Assessors
  - ▶ -- none of competition designs declared as winning entry.
  - ▶ – promoter under advice of Board of Assessors to award second, third and additional prizes as declared
  - ▶ – none of competitors will be considered for appointment
  - ▶ -- as architect for project and
  - ▶ -- promoter not liable to make any further payments to any of competitors.

# 10. APPOINTMENT OF ARCHITECT

- ▶ Award of first prize to a design places promoter under obligation to appoint its author-- as architect for commissioning of project.
- ▶ If Board of Assessors satisfied for a valid objection to appointment of author of winning design as architect
  - ▶ -- he may be required to associate with a senior architect / firm of architects of his choice
  - ▶ -- whose qualifications shall be approved by Board of Assessors.
  - ▶ -- Failing this , author of design placed next on merit appointed as architect subject to similar conditions.
  - ▶ -- award of Board of Assessors shall not be varied for any reasons.
  - ▶ --If no instructions given to design selected by Assessor to proceed within twelve months from date of award,
    - ▶ – he shall receive payment
    - ▶ -- for his services in connection with
    - ▶ -- preparation of Competition drawings
    - ▶ -- of a sum equal to 1.00 percent on the amount of estimated cost.
    - ▶ -- First premium shall be deducted from the sum so paid.
    - ▶ -- If work subsequently proceeded this sum shall from part of his ultimate fee

# 11. EXHIBITION, 12. RETURN OF DESIGN DRAWINGS

## ▶ 11. EXHIBITION OF ENTRIES

- ▶ –All competition designs
- ▶ -- including those disqualified by Board of Assessors
- ▶ -- exhibited for at least one week
- ▶ -- together with a copy of the signed report of Board of Assessors.
- ▶ -- Exhibition shall be open to public free of charge.
- ▶ --Promoter to notify all competitors & announce in media
- ▶ -- days / place of public exhibition of competition.
- ▶ --Promoters to submit to COA –a copy of signed report of jury and
- ▶ -- if requested photographs of selected designs for possible publication.

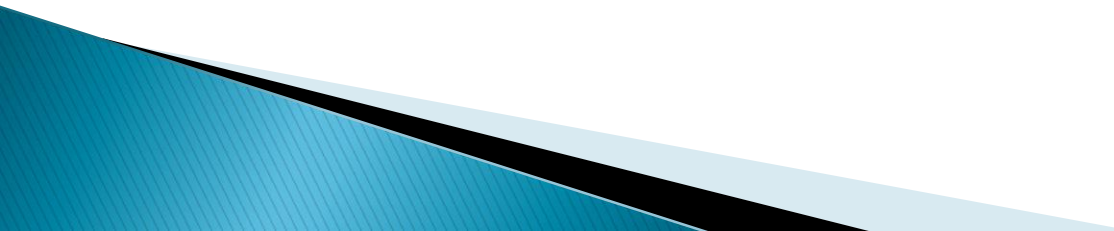
## ▶ 12. RETURN OF DESIGN DRAWINGS

- ▶ --All drawings, plans, models etc.
- ▶ -- submitted except those of winning design
- ▶ -- shall be returned by promoter at the end of public exhibition at his own cost.
- ▶ -- Drawings, plans, models of **winning design** shall be returned to its author
- ▶ --on being appointed as Architect for Project or
- ▶ -- after six months from date of announcement of award by Board of Assessors whichever is early.

# Role of Assessors / Senior Assessor)

- ▶ Role of Assessors / Senior Assessor shall be to ;
- ▶ -- Assist in preparation / approval of project brief.
- ▶ -- Type of Competition to be held
- ▶ -- Study / understand requirements of Local Authorities
- ▶ -- Visit / examine project site,
- ▶ -- Advise on appointment of Technical Advisers, if necessary.
- ▶ -- Finalise competition conditions.
- ▶ -- Prepare final report/award.
- ▶ -----
- ▶ -- The project brief most important document of competition
- ▶ -- Success depends upon clarity / completeness of brief.
- ▶ -- Need close cooperation between Promoters / Assessors
- ▶ -- in preparation / finalisation of brief.
- ▶ -- Participation of Assessors in preparation of brief will:
- ▶ -- enable them to understand fully intent of promoter
- ▶ -- as qualified Architects they would:
- ▶ -- visualize development
- ▶ -- with reference to promoter's requirements,
- ▶ -- site conditions etc.
- ▶ -- in interpreting the competition entries.

# Role of Technical Advisor

- ▶ For complicated projects -- Hospitals, Airports etc.
  - ▶ -- projects involving highly technical elements,
  - ▶ -- **Technical Adviser** necessary
  - ▶ -- in initial stage
  - ▶ -- to help Promoter/ Assessors
  - ▶ -- to draw up brief and
  - ▶ -- advise Assessors on technical aspect of competition entries.
- 

# Board of Assessors

- ▶ The Board of Assessors :
  - ▶ --shall be set up before promotion of competition.
  - ▶ --Their names stated in competition conditions.
  - ▶ -- composed of a smallest reasonable number of assessors
  - ▶ -- Odd in number
  - ▶ --Size related with size of competition project
  - ▶ -- preferably number not to exceed seven
  - ▶ --Of Assessors , number of Architects , registered with COA to be in majority of at least one.
  - ▶ -- number of Assessors representing promoters not to exceed two
  - ▶ --Each member to examine / approve competition conditions before made available to competitors.
  - ▶ -- may invite Technical Advisers as experts in specialised fields
  - ▶ -- to assist in assessment of competition entries without any voting rights.

# Board of Assessors

- ▶ --Quorum for meeting shall be at least 2/3rd of voting members of the Board
- ▶ -- Board to elect a Chairman from among its members.
- ▶ --In event of death of an Assessor before/ during assessment of competition/ his inability due to illness/ or any other cause-- another Assessor shall be appointed
- ▶ --No promoter of competition / assessors/ any partner, associate, or employee -- compete or assist a competitor, or act as architect or joint architect for project.
- ▶ This regulation shall not be applicable to:
  - Staff / students of an Institution of which a member of regular teaching staff is on the BOA, provided he is not the sole Assessor
  - Employees of a Government/ Semi-Government /Public Sector organisation of which one of its employees is on Board of Assessors --provided he is not sole Assessor and Board consists of three or more Assessors of whom only one is such an employee.

# Board of Assessors

- ▶ In two stage competitions, same members shall judge both stages of competition.
- ▶ In no case a competition as a single stage competition proceed to a second stage except with knowledge of the Council of Architecture and
- ▶ --arrangement for payment of honoraria to the competitors involved, over and above the prize money provided for in the original competition.
- ▶ In such a secondary competition taking place-- Assessors appointed for the original competition must be reappointed by promoters.
- ▶ Any drawings, photographs, models or other documents not required by competition conditions excluded before examining competitors' entries.
- ▶ --disqualify any design which does not conform to any of the conditions, instructions or requirements of competition.

# Board of Assessors

- ▶ The Board must make an award.
- ▶ -- The award shall be final and shall be made public in open competitions
- ▶ -- intimated individually to all those participating in limited competition,
- ▶ -- by a date stated in the conditions.
- ▶ --while distributing award money--- shall make full use of the amounts set aside for prizes in competition conditions.
- ▶ --In an ideas competition, a first prize shall be awarded.
- ▶ -- decision shall be taken by a majority vote with a separate vote on each entry.
- ▶ --The award including Assessors report to promoter, shall be signed by all members of Board before they disperse.
- ▶ Board to make its award known to promoter in a formal statement signed by a simple majority of members.
- ▶ Statement to indicate number of designs examined and order of prizes awarded. Statement must be completed before envelopes are opened and Assessors disperse.
- ▶ The fees/ travel expenses / out of pocket expenses of members of Board shall be paid by promoter.

# ► Architect's – Duties and Responsibilities

# Architect's – Duties and Responsibilities

- i. **Business**– while dealing with client money
- ii **Technology**–Planning, designing, controlling construction, coordinating all activities
- iii **Quasi** – judicial—administering contract between client and contractor besides resolving conflicts between them

**In addition--**

- ▶ **Rendering quality services**
- ▶ **with highest level of Competency**
- ▶ **Exercising due care**
- ▶ **following Professional conduct**

# Owners expectation from Architect

- i. **Skill & knowledge** – required to design the project
- ii. **Understanding**– purpose and function of building to be designed
- iii. **Legal knowledge**– Acts, Rules, bye-laws relating to designing, constructing --buildings/permission
- iv. **Cost**– ability to advise on cost to decide on scope/specifications
- v. **Drawings**– skill to prepare drawings, plans ,specification for execution/ approvals
- vi. **Payments**– ability to certify payments– bills
- vii. **Modifications**– skill for accommodating changes, if any, during construction
- viii. **Resolving problems**– relating to construction, contractor, authorities– through intervention and advice
- ix. **Quality**– ensure quality of work
- x. **Completion**– of project on schedule
- xi. **Service**– Render quality service
- xii. **Advise**– Render best of professional advice

# ▶ The Duties and Responsibilities of a Building Contractor

# Building Contractor?

- ▶ A building contractor is:
  - ▶ -- an individual
  - ▶ --who engages in
  - ▶ -- planning, developing and coordinating of activities
  - ▶ --which relates to construction of buildings.
- ▶ The building contractor is :
  - ▶ --the individual
  - ▶ --who oversees construction
  - ▶ -- and ensures that
  - ▶ -- all necessary measures are taken
  - ▶ -- to complete the project.

# Duties/ Responsibilities of a Building Contractor

- ▶ A building contractor has
  - ▶ -- wide range of duties /responsibilities
  - ▶ --in construction of buildings.
  - ▶ --his job involves:
    - ▶ i. hard work
    - ▶ ii thorough knowledge
    - ▶ lii thorough understanding and
    - ▶ lv expertise
    - ▶ v of processes
    - ▶ vi.which form part of construction/building of structures.

# General Responsibilities of a Building Contractor

- ▶ Responsibilities of a contractor involve:
  - ▶ -- i planning,
  - ▶ -- ii carrying activities relating to:
    - ▶ -- construction of a building/ structure.
- ▶ contractor do duties by:
  - ▶ --i supervising employees
  - ▶ --ii planning how project will be carried out
  - ▶ -- iii completing project
  - ▶ --iv complying with all existing laws, rules and regulations related to construction.

# Specific Duties of a Building Contractor?

- ▶ Contractor required to do certain duties to ensure that project is completed on time/ correct manner;
- ▶ i to prepare and implement plan– in which to carry out construction project.
- ▶ –ii developing timeline to be followed from start to finish.
- ▶ –iii hiring, supervising, firing employees.
- iv take care of payroll .
- v obtaining materials for the project& correspondence with material suppliers
- vi to acquire licenses / permits from relevant entities for starting the building project-- building licenses to zoning permits
- vi Knowledge of relevant regulations and laws regarding construction process

# Specific Duties of a Building Contractor

- ▶ i Contractor to establish a budget for construction project and follow that budget as closely as possible.
- ▶ ii Budget to help building contractor to obtain supplies, hire workers and finish the construction in a cost-efficient manner.
- ▶ iii building contractor needs to follow the building project closely .
  - iv to deal with all emergencies /surprises relating to project that occur on-site and sometimes off-site as well.

# What Traits Make a Good Contractor?

- ▶ Good building contractor should :
- ▶ –i **Possess decisiveness**– taking important decisions on a daily basis,– having knowledge of what he wants and acts on it.
- ▶ –ii **have experience**– helps in getting the job done in a quick and efficient manner.
- ▶ –– iii **have good leadership qualities**– many individuals depend upon building contractor to show way
- ▶ –iv **Capacity to resolve issues** ––in a quick and speedy fashion–– delay in one portion of construction project can hold up entire process,.
- ▶ –v Must also **knows how to troubleshoot** ––for beneficial results in the end
- ▶ vi. **Building contractors have multi-faceted duties and responsibilities. Contractors who are experienced , determined, steadfast , decisiveness and seek quick resolutions prosper greatly in occupation**

# ▶ **CONTRACT and ARBITRATION**

# CONTRACT

- ▶ Most construction carried through contract system—agreement between owner and construction agency
- ▶ Construction a complex process involving both parties
- ▶ Owner's team— architect, engineer and consultant
- ▶ both parties must pull in same direction & with same speed to successfully complete project
- ▶ Word— Contract— drawn from latin word— *contractor*— drawing together
- ▶ Contract—An agreement enforceable by law is a contract— Indian Contract Act, 1872
- ▶ Contract—an agreement between two or more persons
  - ▶ --intended to be enforceable by law
  - ▶ --constituted by making offer by one and
    - ▶ – Acceptance by other
    - ▶ --to do or abstain from doing that act

# Object of Contract

- ▶ To complete work given to construction company :
    - ▶ --without any complication
    - ▶ – within specified time
    - ▶ -- within specified cost
    - ▶ –conforming to specified quality
    - ▶ --without loss of harmony between key participants
- 

- ▶ Completion of work
  - ▶ Completion of work within time
  - ▶ Completion of work within time and cost
  - ▶ Completion of work within time and cost conforming to quality
  - ▶ Completion of work within time and cost conforming to quality and without sacrificing harmony
- 

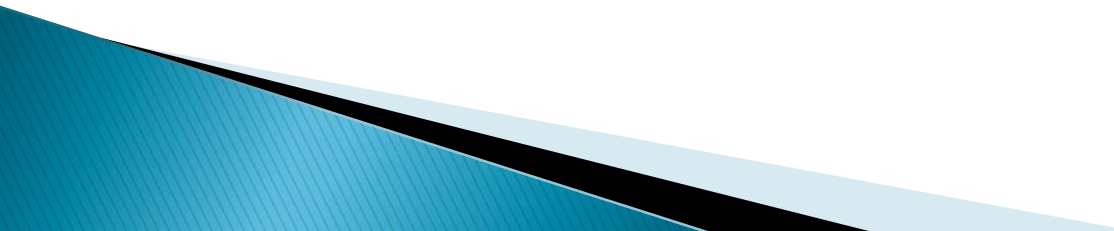
- ▶ Owner desires– Best value for money spent
- ▶ Contractor wants – Maximum rate of return on investment
- ▶ Common objective–Completion of Work

# Pre- Requisite of Valid contract

- ▶ i. There must be two parties one making offer and other accepting offer
- ▶ ii. Agreement between contracting parties to terms & conditions of contract
- ▶ iii. Genuine intention of parties to accept/fulfill their rights and duties
- ▶ iv. Legal capacity of parties to make contract
- ▶ v. Consideration of some value exchanged
- ▶ vi. Agreement enforceable by law--Agreement not enforceable is a void contract
- ▶ vii. Agreement enforceable at option of one or more parties but not enforceable at the options of other-- void
- ▶ viii. Both parties must be major
- ▶ ix. Parties must be of sound mind
- ▶ x. Parties must not be in a relationship of undue influence

# Types of Contracts

## Types of contracts–

- i. Based on purpose– full contract, labour contract, /transport contracts /procurement contracts /Turnkey contracts /consultancy/ Erection contracts
  - ii. Based on Economic conditions– lump sum /cost+fee /item rate/ turnkey/ BOOT/ labour/ demolition/ day work
- 

# Types of Contracts

1 Measurement Contracts (Item rate & %age contracts)

- ▶ 2 Lump Sum Contracts
- ▶ 3 Cost plus Fee Contracts
- ▶ 4 Turnkey Contracts
- ▶ 5 BOOT Contracts
- ▶ 6 Labour Contracts
- ▶ 7 Demolition Contracts
- ▶ 8 Other Works
- ▶ 9 Day Works
- ▶ 10. Consultancy Contracts

# Types of Contracts

## 1 Measurement Contracts

- Item rate --for large works-- owner quotes quantity and unit, Tenderer-- Rate for each item-- payment based on actual measurement
- % age contracts-- for small/ repetitive/ repair/ maintenance works--owners gives, items, rate, quantities, amount-- Contractor --quotes-- % above, below, at par-- payment based on actual measurement

- ▶ 2 Lump Sum Contracts--when cost of entire work quoted based on scope of work, planning, designing, working drawings all drawings, specifications frozen before inviting tender--
  - ▶ -- owners knows total cost of work in beginning,
  - ▶ -- no change in scope can be made,
  - ▶ -- if made additional payment made

# Types of Contracts

- ▶ 3 Cost plus Fee Contracts– adopted for emergency/miscellaneous/undefined scope of works–
  - ▶ Contractor paid– actual cost+ fixed fee+ incentive
  - ▶ – contractor risk minimum–owner cost uncertain– adopted in government/private sector work
- ▶ 4 Turnkey Contracts—
  - ▶ contractor responsibility for defined scope of work— planning, designing ,construction, commissioning
  - ▶ – paid fixed lump sum amount
  - ▶ – Risk for the contractor— weather/ site/foundation/ unforeseen problems
  - ▶ –suitable for projects where all functional parameters are defined
  - ▶ – thermal plant– commercial/ defense /interior projects
  - ▶ –eliminates co-ordination problems
  - ▶ -- with minimum responsibility centers

# Types of Contracts

- ▶ 5 BOOT Contracts– Build, own, operate, Transfer contracts
- ▶ —encouraging private sector–to fund– build– own– operate
- ▶ ––collect toll, for a fixed time and then hand back projects to authority
- ▶ – suitable for highways, airports, power plant, waters supply, bridges etc
- ▶ – govt. acts as facilitator– legal issues, land acquisition,, enforcement
- ▶ – Government may also join – in a separate holding company
- ▶ DFBOOT– Designing, financing, build, own, operate, transfer

# Types of Contracts

## ▶ 6 Labour Contracts–

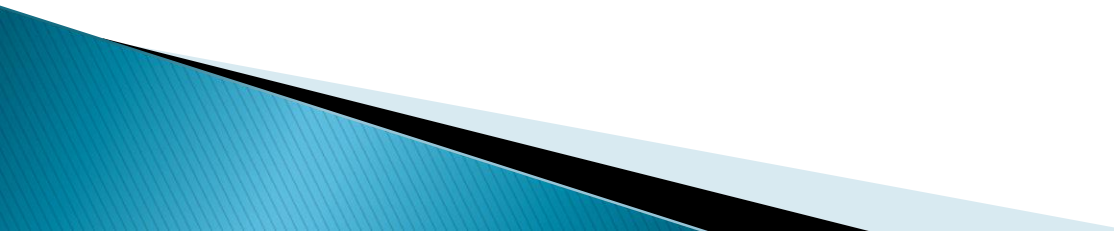
- ▶ –owner supplies all materials
- ▶ – contractor– labour/ equipment/plant/machinery
- ▶ – responsible for execution work
- ▶ – may lead to misuse/waste of material
- ▶ – popular for quality of material/construction
- ▶ – problems related to escalation of cost of material donot impact project
- ▶ —need effective supervision for;
  - ▶ -- quality
  - ▶ --wastage
  - ▶ --workmanship
- ▶ –suitable for all types of work
- ▶ – new/addition/alteration/repair etc

# Types of Contracts

## ▶ 7 Demolition Contracts–

- ▶ –involves demolition of existing building/removal of debris
- ▶ – contractor removes/salvage/ pay for material to owner
- ▶ – highest bidder given contract
- ▶ –entire bid money deposited by contractor
- ▶ – to forfeit incase of default/ non-compliance/non-removal of debris,
- ▶ Contractor – take insurance of worker, compensate them for accidents
- ▶ contract to define scope of work– part/whole demolition
- ▶ –incase of part– to make good any loss to remaining building
- ▶ – item to be retained by owner to be specified
- ▶ –Earnest money, refunded to contractor after the work

# Types of Contracts

- ▶ 8 Other Works–
    - ▶ -- splitting
    - ▶ --large repetitive works
    - ▶ --into smaller parts
    - ▶ --- allotted through tendering
    - ▶ --- canals/metros railway/road work/electrical/water supply etc–
- 

# Types of Contracts

- ▶ 9 Day Works
  - ▶ –for specialized works of small nature
  - ▶ – which cannot be measured in value terms
  - ▶ –decorative/craft/artwork etc
  - ▶ –payment include material cost+ hire
  - ▶ – charges for machinery + labour charges +profit
  - ▶ --- no security/tendering
  - ▶ – clerk of work to report to architect/engineer for progress
  - ▶ – wages paid to conform Government guidelines
  - ▶ – uncertainty in cost
  - ▶ – difficulty in measurement

# Types of Contracts

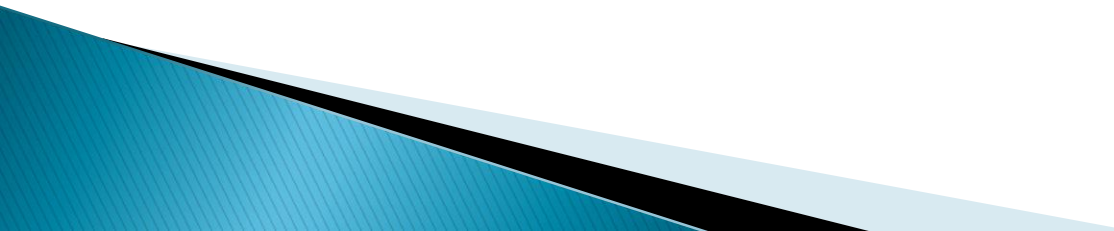
- ▶ 10. Consultancy Contracts–
  - ▶ --Hiring of consultants for specialized projects
  - ▶ -- paid on job basis/ lump sum basis/ call basis/ retainer ship basis
  - ▶ -- depending on situation/ other factors
- ▶ **Consultants selected on**
  - ▶ --Quality base selection– for specialised projects– master plans/ finance
  - ▶ --Best Expert Advise—Feasibility/structural engineering/major projects–dam
  - ▶ -- Selection under Fixed Budget– for simple/precisely defined projects

# ► Selection of Contractors

# Selection of Contractors

- ▶ Selection of contractor– most important part of contract management
- ▶ Critical Factors of construction depend on selection of a suitable contractor to ensure—
  - ▶ – Quality
  - ▶ -- Speed
  - ▶ --Economy
  - ▶ -- Harmony
- ▶ – Selection of Contractor to be based on principles of--equity and fair play

# Selection of Contractor

- ▶ Contractor is selected by owner by any of the following process after negotiations, when needed
  - ▶ 1. Public Tender
  - ▶ 2. Pre- Qualification
  - ▶ 3. Post- Qualification
  - ▶ 4. Limited Tenders
  - ▶ 5. Single Tenders
  - ▶ 6. Nomination
- 

# Selection of Contractor– Public Tender

Tender– or quotation is a:

- written offer
- to execute a work or
- supply of materials required
- for construction of a facility
- within a stipulated time
- under specified conditions of tender/quotation

## Public Tender

- ▶ For Government works
- ▶ – public tenders invited from registered contractors of appropriate class
- ▶ – Tender notice explains
- ▶ -- conditions
- ▶ – work experience,
- ▶ financial solvency,
- ▶ annual turnover,
- ▶ registration as contractor.
- ▶ General reputation is considered before awarding the contract

# Pre-qualification of contractors

Contractors are pre-qualified to ensure:

- competition is among capable and qualified bidders
- Selection of best contractor
- Elimination of incompetent/ insincere contractors
- ▶ Pre-qualification of contractor is based on—
  - ▶ – work experience,
  - ▶ – financial solvency,
    - ▶ -- annual turnover, .
  - ▶ – quality of work executed
  - ▶ --Organisational structure
  - ▶ --Board of Directors
  - ▶ --Plant and Machinery available
  - ▶ – Manpower available – technical/non-technical
  - ▶ --General reputation

# Delhi Government– Registration of contractors

**Tender documents is issued only to those contractors, who are registered in the**

- I&FC Deptt. ( Irrigation and Flood control Deptt)**
- CPWD,**
- PWD (NCT of Delhi),**
- MES**
- duly got verified by I&FC Deptt.**



# Delhi Government– Registration of contractors



- ▶ Contractors enlisted in various classes are entitled to submit their tenders, as per financial limits of estimated cost shown below:

- |             |   |                      |
|-------------|---|----------------------|
| ▶ Class I   | – | upto Rs. 20.00 Crore |
| ▶ Class II  | – | upto Rs. 5.00 Crore  |
| ▶ Class III | – | upto Rs. 150.00 lac  |
| ▶ Class IV  | – | upto Rs. 60.00 lac   |
| ▶ Class V   | – | upto Rs. 15.00 lac   |

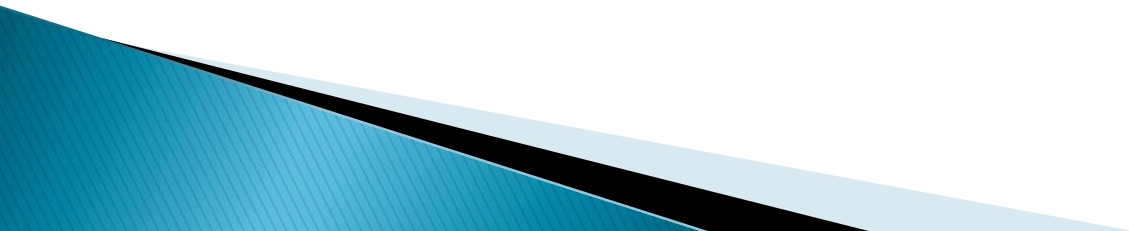
# Enlistment Procedure:

- ▶ Contractor to submit application in a prescribed form complete with all documents
- ▶ Reports submitted verified / works done by contractor inspected and/or to get such other reports as may be considered necessary.
- ▶ If contractor found suitable for enlistment—enlistment order issued—otherwise rejection letter sent of to contractor
- ▶ -- decision of enlistment authority final and binding on contractor.
  - authority reserves right to limit number of contractor to be enlisted in any class .
- ▶ Enlistment of contractors may be closed at any point of time.
- ▶ While closing department may have a reserved list of eligible contractors from pending applications.
- ▶ Out of this-- contractors enlisted depending on requirement in a particular area/ NCT as a whole.

# Period of enlistment

- ▶ Enlistment valid for a period of four years.
- ▶ Enlistment can, be revalidated .
- ▶ Each revalidation shall be for a period of three years
- ▶ Enlistment shall be open to:
  - ▶ -- review by the enlistment authority
  - ▶ -- liable to termination,
  - ▶ -- suspension
  - ▶ -- demotion to a lower class
  - ▶ -- any other such action
  - ▶ -- at any time if considered necessary
  - ▶ -- by the enlistment authority,
  - ▶ -- after issue of show cause notice

# ARBITRATION



# ARBITRATION

- ▶ Disputes are part of human living
- ▶ In ancient times disputes referred to Village Panchayats for speedy settlements
- ▶ During British Rule, Arbitration was encouraged
- ▶ Arbitration Act, 1899 was the first Act
- ▶ Replaced by Arbitration Act, 1940 as full code
- ▶ The Arbitration and Reconciliation Act, 1996 based on the UN Model Act was passed in 1996
- ▶ Act provides for–
  - ▶ Domestic Arbitration
  - ▶ International commercial and
  - ▶ Enforcement of foreign Arbitral awards


# Modes of Settlement of Disputes

- ▶ **1. Capitulation**– weaker party give in –to retain goodwill/ long term business relationship with stronger party
- ▶ **2. Negotiation**--Both parties sink differences and try to reach amicable settlement
- ▶ **3. Arbitration**– Disinterested/impartial third party appointed to adjudicate
- ▶ **4. Litigation**– Disputes taken to court resulting in abnormal delay and heavy expenditure
- ▶ **5. Dispute Resolution Board**– Board constituted on award of contract to resolve disputes as and when they arise

# ARBITRATION

- ▶ --Settlement of a dispute (whether of fact, law, or procedure)
- ▶ between parties to a contract
- ▶ -- by a neutral third party (the arbitrator)
- ▶ -- without resorting to court action.
- ▶ -- Arbitration is usually voluntary but
- ▶ -- sometimes it is required by law.
- ▶ -- If both sides agree to be bound by arbitrator's decision
- ▶ 'award' becomes a binding arbitration.
- ▶ Exact procedure to be followed (if not included in the contract under dispute)
- ▶ – governed usually by a country's arbitration laws, or
- ▶ --by arbitration rules prescribed by International Chamber Of Commerce (ICC)


# ARBITRATION

- ▶ Arbitration most popular mode of settling disputes in building and construction disputes
  - ▶ Most construction projects provide for arbitration
  - ▶ Helps in imparting justice in a:
    - ▶ -- speedier and
    - ▶ -- cost-effective manner
  - ▶ Determining of disputes by the decision of one or more – persons known as Arbitrator
  - ▶ Every dispute – which can be settled by a civil court can be settled under Arbitration
  - ▶ It is an alternate method of settling disputes
- 


# ARBITRATION– Objectives

- ▶ Make provision for arbitral procedure which is:
  - ▶ -- fair,
  - ▶ -- efficient
  - ▶ -- capable of meeting needs of specific arbitration
- ▶ To Minimise supervisory role of Courts
- ▶ Arbitral tribunal to give reasons for the award
- ▶ To ensure Arbitral tribunal remains within its jurisdiction
- ▶ Permit Arbitral tribunal to use:
  - ▶ -- mediation,
  - ▶ -- conciliation or
  - ▶ -- other procedures to settle disputes
- ▶ To make decisions of Tribunal enforceable as a degree of court

# Definitions

- ▶ Arbitrator– A person appointed to settle disputes
  - ▶ Arbitration Agreement– A written agreement between client and contractor to settle future disputes
  - ▶ Order of reference– Order containing names of the arbitrator, specific dispute, nature, time limit for award
  - ▶ Presiding arbitrator–An umpire when each party's arbitrator or both parties arbitrator choose one presiding arbitrator
  - ▶ Award– Written decision of the arbitrator on completion of the proceedings
- 

# Arbitration Vs Litigation

- ▶ Advantage of Arbitration over litigation:
  - ▶ More Speed
  - ▶ Less Expensive
  - ▶ More Privacy
  - ▶ Informal Proceedings
  - ▶ Expertise of the Arbitrators in the field
  - ▶ Flexibility in choice of meeting place and location
  - ▶ finality of decision
  - ▶ Continued good relations between parties—owners and client
- 

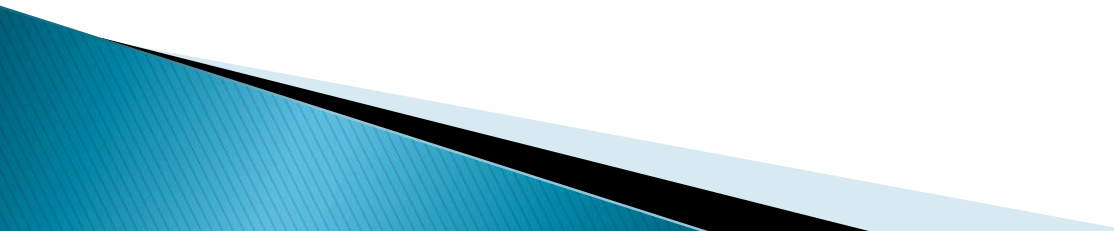
# Procedure for Arbitration

- ▶ Specific clause to be introduced in contract– settling disputes by arbitration
- ▶ Aggrieved party to approach the designated authority to appoint arbitrator with list of all/selected disputes and amount involved for each dispute–
- ▶ Arbitrator is then appointed with list and -- referred with the papers submitted
- ▶ Few contracts provide for direct resolution of disputes by parties– failure to do so can lead to appointment of an Arbitrator
- ▶ Arbitration conducted under the provisions of Arbitration and Conciliation Act, 1996
- ▶ Parties are to be treated on equality and given full opportunity to present their case

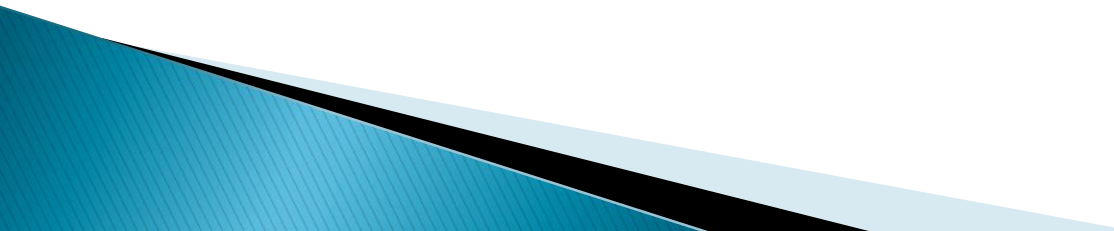
# Procedure for Arbitration

- ▶ Parties are free to agree on the procedure for Arbitral Tribunal
- ▶ Parties free to agree on the place and language for arbitration
- ▶ Arbitration proceedings start from the date of receipt of request for arbitration
- ▶ Claimant to state facts supporting the claim, issues involved and remedy sought
- ▶ Respondent to give defence against these claims
- ▶ Tribunal to decide on oral/documentary evidence
- ▶ Experts appointed by Tribunal in case of specific technical issues
- ▶ Assistance of court may be sought for taking evidence

# Procedure for Arbitration

- ▶ Decision of the Tribunal to be by majority– being in odd numbers
  - ▶ Award to be in writing and signed by all members
  - ▶ It is to be reasoned award unless otherwise agreed to by parties
  - ▶ Award amount, if not paid, to carry interest @18% per annum from date of award to date of payment
  - ▶ Award to be final and binding
  - ▶ Enforced as – decree of the Civil Court
- 

# Characteristics of Good Award

- ▶ Sticking to the scope of defined issues
  - ▶ Stick to time limit
  - ▶ Unambiguous, unconditional, complete and clear decision
  - ▶ Judgment and decision that of the Arbitrator only and no one else
  - ▶ Complete application of mind of Arbitrator's
- 

# ▶ VALUATION

# Valuation

- ▶ Valuation was introduced due to
  - ▶ -- Land Acquisition Act – for assessing value of land on market value
  - ▶ -- for levying property tax by municipalities based on ratable value of property
  - ▶ -- for buying/selling property
  - ▶ -- Valuation necessity till property lives as a concept
- ▶ Valuation is a process by which value of an asset is estimated
  - ▶ – It is not an exact science with mathematical accuracy
  - ▶ –It is an expert opinion – supported by relevant fact and information impacting value of asset
- ▶ Duty of the valuer to avoid undervaluing/ over-valuing property

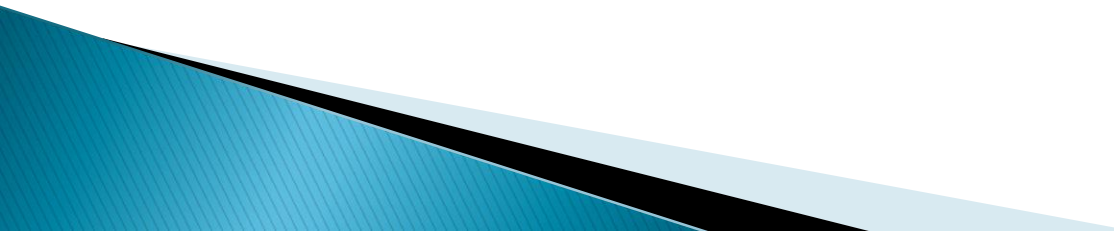
# Valuation

- ▶ It is a guess based on certain objective factors
- ▶ –Valuation depends upon–
  - ▶ -- location,
  - ▶ -- quality of construction,
  - ▶ -- life of building
- ▶ – current status of building
- ▶ -- type/nature of buildings– temporary/ permanent
- ▶ -- prevailing cost of land
- ▶ -- Cost of construction– plinth area rates
- ▶ –demand and supply
- ▶ – Purpose of valuation
- ▶ –cost indices
  - --Available data
  - sound judgment, experience
- It is multi-disciplinary work involving knowledge of—  
Architecture, engineering, mathematics, land, geography,  
materials etc

# Value

- ▶ Value represent—
  - ▶ -- worth, utility, attachment to a thing in the eyes of a person
  - ▶ – For a thing to have value it must possess
    - ▶ – economic & Legal qualities--- utility, demand, scarcity,, transferability of ownership
  - ▶ --Value differs from person to person
  - ▶ – hence different persons value differently same property
  - ▶ -- Value is a relative concept
  - ▶ – valuation is a function of:
    - ▶ -- place,
    - ▶ -- purpose and
    - ▶ -- time

# Method of Valuation

1. Land and Building Method
  2. Composite Rate Method
  3. Development Potential Method
  4. Rent Capitalization Method
  5. Profit Capitalization Method
  6. Cost Approach Method
- 

# Land and Building Method

Land and Building Method involves a sum of ;

- Fair Market Value of Land + Depreciated value of building
- Depreciated value of building is worked out on the basis of plinth area, plinth area rate of building based on CPWD/PWD for the area based on cost index, age of building, estimated total life of building, salvage value–
- Value of building= Value of building component+ services+ market value of land
- Valuation used for –
  - Residential/
  - self-occupied properties and
  - certify the present worth of property

## 2. Composite Rate Method

- ▶ Method used for assessing value of Residential apartment and commercial complexes
- ▶ Comprises of = Rate per unit area of building + proportionate share of land
- ▶ Land component decided on– location, land values, amenities provided by developer, specification of land
- ▶ Building component depends on– cost of construction, age, specification, finishes, structure, materials, location, accessibility, quality etc
- ▶ In case of old apartments– depreciated value is worked out for the building

# 3 Development Potential Method

- ▶ Based on the potential of land for immediate future development– fair market value
- ▶ Used for assessing value of vacant undeveloped/under–developed land parcels on outskirts of city and for land within the city based on the existing local bye–laws
- ▶ Used by developers for investment into land and carving out smaller plots for sale
- ▶ Applied when demand for small plots exist and land is sufficient to take up real estate development involving residential/commercial development with minimal cost

# 4 Rent Capitalisation Method

- ▶ Method used for valuation of rented properties, properties under Rent Control Act
- ▶ Method considers– tenant right( not legally saleable) and owners right to receive rent.
- ▶ This method has– Net Maintainable Rent– NMR for landlord which is worked out by deducting outgoings from the Gross Maintainable Rent– GMR
  - ▶ – Net rent capitalised and depreciation is ignored
- ▶ Essentials for this valuation are–
  - ▶ -- Gross rent,
  - ▶ -- outgoing,
  - ▶ --Capital employed,
  - ▶ -- rate of return ,
  - ▶ -- life of building,
  - ▶ --unused portion of asset for future use,
  - ▶ -- money required for repair

# 5 Profit Capitalization Method

- ▶ Used for single commercial properties like– cinema, hotel, marriage halls etc
- ▶ Net profit is capitalised
- ▶ Based on Gross profit minus outgoings
- ▶ Method sensitive to market variations
- ▶ Method approximate– applied in the absence of data by other methods
- ▶ Net profit obtained– helps to assess value of property along with rate of return
- ▶ Net profit– average of last 3–5 years taken
- ▶ Part of profit is goodwill taken from the tenets

# 6. Cost Approach Method

- ▶ Applied primarily to service properties– which are
  - ▶ -- not frequently exchanged in market
  - ▶ -- donot generate revenue by themselves
- ▶ Useful on new or special purpose properties
  - ▶ –Logic is that prudent investor:
    - ▶ -- should not pay more for property
    - ▶ -- than cost of producing a substitute property with the same utility

# Valuation Process inbrief

- ▶ Appointment of valuer detailing property, purpose and scale of fee charged
- ▶ Ascertain the purpose of valuation
- ▶ Visit the site of valuation
- ▶ Document the site with maps and photographs
- ▶ Study relevant Act, practices, approach to valuation to suit the purpose
- ▶ Follow the set procedure to determine its value
- ▶ Where necessary check by other methods and observe difference
- ▶ Based on experience/ wisdom form an opinion of the realistic value of asset by appropriate method

# Precautions to be taken while valuation

- ▶ Ascertain all possible facts
- ▶ Identify the property
- ▶ Donot inflate the value
- ▶ Donot understate the value
- ▶ Donot value illegal properties
- ▶ Donot delegate valuation to incompetent colleague/assittant
- ▶ Apply appropriate method of valuation
- ▶ Donot rely entirely on legal opinion
- ▶ Do not rely entirely on previous valuation report
- ▶ Take all possible precaution
- ▶ Remain objective– minimize subjectivity
- ▶ Donot yield to any pressure of offer
- ▶ Use all available legal documents– building plans, occupation certificate, completion certificate etc

# ► Expression of Interest

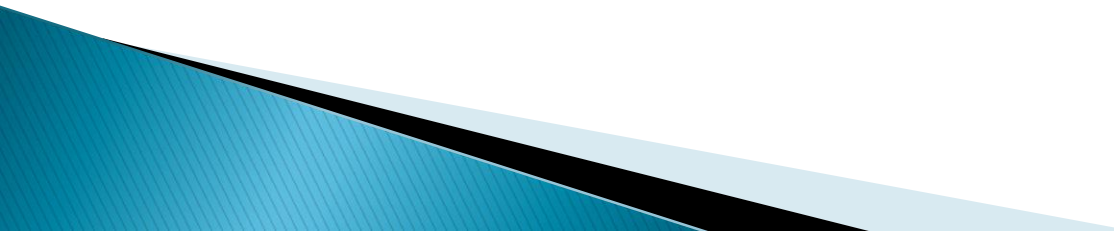
# EXPRESSION OF INTEREST

- ▶ Expression of interest (EOI) -- process of seeking an indication of interest from potential service providers who are capable of undertaking specific work
- ▶ Expression of interest -- submission made by a prospective tenderer in response to an advertisement for supply of goods/ service
- ▶ It is a method by which a client compiles a list of --
  - ▶ --potential supplier
  - ▶ other than recommendations,
  - ▶ research,
  - ▶ maintaining a pre-selected list of possible suppliers based on track record,
  - ▶ asking consultants to prepare a list.
- ▶ Expressions of interest -- form of open tendering that allows anyone to put themselves forward.
- ▶ offers greatest competition
- ▶ advantage of having new / emerging suppliers to try to secure work.
- ▶ Criticised for:
  - ▶ --attracting large numbers of suppliers
  - ▶ --, some of whom may be entirely unsuitable for contract
  - ▶ -- can waste a time effort and money.

# expressions of interest

- ▶ An advertisement placed online or in print press to include:
  - ▶ Description of contracting body.
  - ▶ Description of nature of contract, including scale and budget.
  - ▶ Procurement route, contract type and conditions.
  - ▶ Programme.
  - ▶ Submission address and deadline.
  - ▶ Details of the information required in EOI
  - ▶ Contact details.
  - ▶ Description of company– including financial information.
  - ▶ Relevant experience and technical capacity.
  - ▶ Staff experience and availability.
  - ▶ References.

# expressions of interest

- ▶ Tender process can be a long one,
  - ▶ to avoid potential delays,
  - ▶ EOI should be sought as early as practical.
  - ▶ For construction contract-- when planning approval is received.
  - ▶ for public projects-- process can be very slow .
  - ▶ Ideally, contracts for goods/ services required for project should be advertised at outset of project or soon as possible afterwards.
  - ▶ Failure to advertise could result in long delays.
- 

# Difference between EOI & RFP

- ▶ An Expression of Interest (EOI)
  - ▶ -- multi-staged process
  - ▶ -- used to shortlist potential suppliers
  - ▶ -- before seeking detailed bids
  - ▶ -- used when information required from tenderers is specific but agency unsure of capability of suppliers to provide required goods / services.
- ▶ A Request for Proposal( RFP)–
  - ▶ -- can be a single or a multi-staged process
  - ▶ -- used when project or requirement
  - ▶ -- has been defined,
  - ▶ -- but where an innovative/ flexible solution is sought

# ► ARCHITECTURAL PRACTICE

# ARCHITECTURAL PRACTICE

- ▶ An architect has to open a office to:
  - ▶ -- produce optimum work and
  - ▶ -- deliver efficient service
- ▶ ***Methods of starting practice***
- ▶ Starting own proprietorship firm
- ▶ Buying out practice from others
- ▶ Inheriting
- ▶ Joining some firm and rise from ranks to become partner
- ▶ Joining other architects/ professionals to open practice
- ▶ Joining Govt offices, PSU , CORPORATIONS

# ARCHITECTURAL PRACTICE

- ▶ **In a small office–architect** has to do all work—sourcing project, prepare sketches, finalising schemes, preparing submission drawings, obtaining approvals, preparing working drawings/ cost–estimates, preparing/calling tenders, selecting contractor, supervising construction, ensuring completion besides maintaining accounts and office
- ▶ **In Older practice**—office will have— engineer to prepare estimates/tender/supervise work,
- ▶ **Draughtsman/** – to do detailed drawings,taking out prints ,storing drawings
- ▶ **Typist –cum– receptionist–** for reception, typing, record keeping, diary and dispatch
- ▶ **office boy–** for visiting other offices, depositing documents

# ARCHITECTURAL PRACTICE

- ▶ **In a big practice—**
  - ▶ where architects are more than 15–20–
    - ▶ – trend is to form teams of 3–4 architects headed by a senior architect as a team leader
      - ▶ -- team completely responsible for the project
      - ▶ – principal architect provides overall approach/ concept/ interaction with clients
      - ▶ -- in few cases team leader vested with all powers:
        - ▶ -- even to interact with clients, contractors, consultants
        - ▶ --under direction of principal architect
    - ▶ Turn over is more with greater freedom
    - ▶ Senior architects given salary+ performance bonus

# Office Management

## ▶ Office is a place

- ▶ –where records are prepared ,handled and preserved
- ▶ -- which is centre of business
- ▶ -- where administrative functions—communication, safety, security, co-ordination, planning, cost- efficiency, public relation, achieving organizational goals are performed.
- ▶ Therefore office must –
  - ▶ – improve existing information system
  - ▶ –Reduce paper work–
    - ▶ -- using computer in all areas
    - ▶ --Encourage creative thinking and employees participation
    - ▶ --Improve/maintain public relation
    - ▶ --Attract, acquire and retain talent
  - ▶ – promote cost-efficient office services
  - ▶ --Decentralisation of functions to the extent possible
  - ▶ –Achieving greater productivity through incentives
    - ▶ -- involving employees in productivity– cost, meeting deadlines etc

# Architects duties towards employees, associates and consultants

- ▶ Architects( Professional Conduct) Regulations, 1989–state that Architect would provide their employees with:
  - ▶ -- suitable working environment,
  - ▶ --compensate them fairly and
  - ▶ -- facilitate their professional development,
  - ▶ -- recognize and respect professional contribution of his employees
- ▶ -- provide their associates
  - ▶ -- with suitable working environment
  - ▶ -- compensate them fairly and
  - ▶ -- facilitate their professional development,
  - ▶ -- recognize and respect the professional contribution of his associates
- ▶ -- recognize and respect professional contribution of consultants,
  - ▶ --. enter into agreement with them defining their scope of work, responsibilities, functions, fees and mode of payment

# Management and Architects

- ▶ Management is the art and science of getting results through other people.
- ▶ In architecture besides making other people to perform architect has also to be **role model** and professional contributor– **Team leader**
- ▶ Architect as **co-ordinator** is required to co-ordinate the activities of Key players– consultants, contractor, client, regulatory authorities, sub-contractor, vendors etc– duty is to organise the team to meet defined goals
- ▶ As a **Visionary**– he is to carry out SWOT analysis of project and prepare contingency plan for meeting any eventualities
- ▶ As a **part of business management**—control factors like cost, labour, time,, technology, site execution to complete the project within defined time and defined cost

# Professional Practice– Office structure

- ▶ **Location**–Try to locate office in a central place with visibility and accessibility
- ▶ **Office layout**– informal, more open, less rigid, less hierarchical, promoting personal relationship, generally exclusive cabins for the partners and open cabins for senior designers, work stations, meeting rooms,/discussion area– for meetings/presentation/display of models with clients/consultants
- ▶ **Library**– for knowing latest trends in architecture/ materials/ technologies, doing experimentation, value addition to projects/staff/employees, documentation, reference, knowing norms & standards, creating data base, research, publications , preparing project reports– books, reputed journals, reports, drawings etc

# Professional Practice– Office structure

- ▶ **Material or Sample collection**— Architect office must have large sample collecting area to know latest products in the market to promote greater creative expression– using compact discs for saving space with proper cataloguing
- ▶ **Administrative Section**– in small offices number of functions are combined to be done by one or more persons, but in medium /large offices separate administrative office/manager needs to be appointed to discharge administrative functions besides accountants to manage finances.– staff may include– liaison person, public relation officer, staff boys, security personnel etc
- ▶ **Store**– for storing drawings, materials, record, xerox / printing machine/ printer–

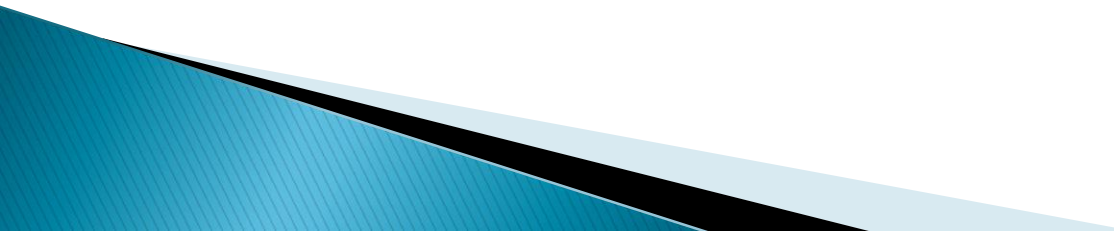
# Professional Practice– Office structure

- ▶ **Pantry**– for serving/ preparing beverages/tea/ heating food/drinking water facility/washing/ coffee/ tea dispenser
- ▶ **Reception area/entrance lobby**– for projecting good image and making value addition to
- ▶ **office**– appealing/good sign board/logo/office address/ photographs/models/good lighting /furniture /painting/ murals/good interiors/colour scheme /flooring/carpeting/false ceiling
- ▶ **Finances**– deals with income/expenditure apart from saving– office though not commercial efforts need to be made to increase income and control expenditure and earn reasonable profit, Provision to be made for taxes/ light beverages /snacks/ gifts to employees/picnics/annual parties– account to be maintained by trained manpower– statements to be prepared by Chartered accountants for taxation besides making use of deductions on books, vehicles, entertaining clients

# Professional Practice– Office structure

- ▶ **Human Resource management–**
- ▶ Growth of any organisation depends upon—
  - ▶ – **Hiring right kind of employees**
- ▶ Making employees supportive/committed to organisation
- ▶ – Keep employees happy / satisfied/ motivated/ providing right kind of ambience– competitive salary, incentives, allowances, bonus ,PPF, gratuity assured career promotion, work freedom, sponsoring for seminars/conferences/annual leave/ flexible working hours/ providing support during period of hardships/taking personal care/ providing training in learning new softwares/ providing opportunities for higher qualifications– IIA etc

# References

- ▶ Handbook of Professional documents– Council of Architecture
  - ▶ Professional Practice– K G Krishnamurthy& S V Ravindra– PHI Learning Private limited, Rimjim House, 111 Patparganj Industrial Estate
  - ▶ Delhi– 110092
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▶ **Thanks and  
Good Luck and  
God Bless you all**

