



Myanmar Construction Industry and Institutions

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Construction Industries Overview (During British Colonial Period)

- Yangon is a city, built in the 18th century around the Mon fishing village of Dagon where the Shwedagon Pagoda is located.
- In 1852, after the second Anglo-Burmese War, Yangon was fallen under the British's control along with southern Burma.
- On the south of old Yangon, the British built a port and a new city, which is now the heart of the Capital.
- There were a lot of Colonial Buildings constructed during the British's administrations some are for the administrative activities and some are for the company operations.
- All such buildings were designed and built by the British technology and specifications as well as their expert persons. There are over 30 Heritage Buildings around Yangon at this point of time & All such buildings are mostly in operatable status and good conditions depends of maintenance practices applied.

Construction Industries Overview (1948-1962)

- After Myanmar's Independence in 1948, the Parliament Democracy Government still follow the British's Practices in the construction industry.
- The Public Works Department as well as Private Companies handled the construction projects in Myanmar, by following the British's Practices.
- Yangon Municipal took the responsibility for granting and controlling of Constructions in Private sector and Housing Board from Public Works took the responsibility on projects for construction of Buildings for the Government Staffs at various part of Yangon, as well as Mandalay.
- Public Works Department took the responsibility for Infrastructure Projects and Public Buildings.
- Follow strictly on the Design and Specifications during the construction process.
- Construction Projects were also given to Private Companies under Contracting, but with strict control in Quality.

Construction Industries Overview (1962-1988)

- During the Socialist Economy Era, there were no Private Companies allowed to participate in the construction industry.
- All the Construction Projects were implemented by Ministry of Construction, Public Works & DHSHD.
- No development of Private Construction Industry during that period.
- However, Private Construction Activities started introducing by the late 1980s

Construction Industries Overview (1988-2012)

- Since after 1988, The Construction activities for Private Housings evolved drastically, in Yangon , Mandalay, etc.
- Private Construction Companies (Contractors) evolved.
- Most of the Private Construction activities were done by such Private Construction Contractors.
- YCDC has permitted Licenses for Private Construction Contractors as well as Licensed Engineers for Design and Construction Activities
- However, the Projects were implemented mostly by the decision of Owners (contractors)
- Weak (or no) in control in Construction process as well as Quality Control
- No or less appreciation on Engineering Knowledge and Practices.
- Building constructed during that period were now over 30 years life and started experiencing problems (Danger of Collapse)

Construction Industries Overview (Current)

- Since after 2012, The Construction Permits were granted from YCDC Building Department only after scrutinizing the details.
- Need to submit the detailed Engineering Calculations for the proposed Project for checking and approval by YCDC.
- Based on the Type and Size of the Buildings, Engineering specifications as well as other documents such as M&E details, Fire Safety, etc. are required to submit.
- Engineers from YCDC regularly check the construction process whether it is in accordance with the approval or not.
- To ensure the quality of buildings, only the Engineers certified by Myanmar Engineering Council are permitted to supervise the construction.
- After completion of the Construction, need Inspection from YCDC for the issuance of Building Completion Certificate (BCC).
- Only after receiving BCC, Private buildings are allowed to use.
- Based on No. of Stories of the Construction project , different Approval Authorities, YCDC, HIC, HBPC

Building Construction Permit Application Procedure

- Now, in metropolitan City areas such as Naypyitaw, Yangon and Mandalay City Development Committee have their own Bylaws, guidelines and rules to follow. Most of them are for planning and building construction permission requirements. Recently, YCDC has started to adopt electronic submission “Yangon Building Permit Submission (YBPS)”

Building Review Process

- **Low Risk:** Residential, 2-3 Stories_ Drawings with seismic detailing, with RE endorsement
- **Medium Risk :** walk-up, 4 to 12 stories, mid-size condominiums, small public buildings- Drawings with design calculations, with RSE/ PE endorsement, Fire code review required.
- **High Risk :** 13 stories and higher- Drawings with design calculations, with PE endorsement, Fire code review required, CHPB design review required.

Construction Industries Overview (Current)

- Public (Government) Construction Projects were done by Contracting.
- Concerned Ministry/Departments called for Tender for the proposed buildings together with the design details & Contractors participated in tendering with the estimates and plans as per the provided design and specs.
- Recently, government adopted third party inspection requirements for all government projects except small and special projects. 2% of the project budget is reserved for third party inspection. Therefore, quality driven technologies, quality and management systems are in high demand now. Quality assurances, laboratory and supply chain management are also in high demand.

Associations & Institutions related with Construction Industry

- Federation of Myanmar Engineering Societies (Fed. MES)
- Myanmar Engineering Council (MEngC) (PE, RSE, RE)
- Myanmar Architect Council (MAC) (SLA, LA, RA)
- Association of Myanmar Architects (AMA)
- Myanmar Construction Entrepreneurs Federation (MCEF)
- Myanmar Licensed Contractors Federation(MLCF)
- High-Rise and Public Building Projects Committee (HPBC)

Federation of Myanmar Engineering Societies

- Established since 1995 as Myanmar Engineering Society
- Restructured as Federation of Myanmar Engineering Societies on 19-01-2019.
- Non- Government, Non-Political Organization purely intended for the :-
 - **Development of Engineering Profession**
 - **Development of Competitiveness**
 - **Development of Human Resources**
 - **Development of Capacity**
 - **Development of Industrial & Infrastructure of the Nation**

TDs, Committees & Societies at Fed. MES (related with Construction Industry)

- Myanmar Society of Civil Engineers (MSCE)
- Myanmar Society of Mechanical Engineers (MSME)
- Myanmar Society of Welding Engineers (MSWE)
- Myanmar Green Building Society (MGBS)
- Building Engineering Institute (BEI)
- Myanmar International Consulting Engineers Group (MICEG)
- Myanmar Earthquake Committee
- Industrial & Construction Safety Committee
- Special Projects Committee
- Civil & Structural Technical Division
- Water Supply & Sanitation Technical Division
- Geotechnical Technical Division
- Air-Conditioning and Refrigeration Technical Division

Myanmar Engineering Council (MEngC)

Established in 2013 under Pyihtaungsu Hluttaw Act. No. 23/2013 dated 28/11/2013

- **Vision**

- Our future success driven by qualified Myanmar engineers, graduate technicians and technicians.

- **Mission**

- To become Myanmar engineers and technicians who can satisfactorily fulfil the needs of international standard and quality in their engineering professions.

Objectives of MEngC

- a) to uphold and upgrade the dignity, ethics and quality of the Myanmar citizen engineers, graduate technicians and technicians who are practicing engineering works;
- b) to explore using engineering technology and information technology combined the good methods, research and development activities by which the natural resources and human resources of the State may be beneficially applied with least impact on environment;
- c) to carry out guidance and supervision, and to take necessary actions for fulfilment of the requirements of stipulated technical standard, proper method, free from danger, keeping ethic and being dutiful in the fields of engineering and technology education, researches and services;
- d) to service engineering and technology related functions and duties beneficial for the State assigned by the relevant Ministry and relevant organizations;

Quality Policy of MEngC

- to enhance the systematic registration by using best practices and standards regionally and internationally;
- to build the mutually reliable relationship with stakeholders and interested parties through providing their needs and expectations complied with law, rules and regulations;
- to drive continual improvement of quality assurance on engineering education and create the opportunities of engineering professional development programs for the benefit of the State

Types and No of Engineering Licenses (April 2020)

➤ Registered Engineer (RE)	-	7937
➤ Registered Senior Engineer (RSE)	-	3705
➤ Professional Engineer (PE)	-	1116
Total	-	12758

Strength of Engineers Certified from MEngC

Sr.	Specialized area (Construction Industry Related)	PE	RSE	RE	Total
1	Civil - Construction	279	2,595	4,443	7,317
2	Civil - Structural	63	63	449	575
3	Civil - Construction (Bridge)	27	1	7	35
4	Civil - Construction (QS)	1	65	8	74
5	Civil - Construction (Road)	40	1	121	162
6	Civil - Construction (Road & Bridge)	2	6		8
7	Civil - Geotechnical	22	10	37	69
8	Civil - Water Resources	72		31	103
9	Civil - Water Supply & Sanitation	16	58	20	94
10	Electrical- BS	64	298	815	1,177
11	Mech- BS	51	92	346	489
12	Mech HVAC	15	26		41
Total Certified Engineers in Construction Industry		652	3,215	6,277	10,144

Source ; MEngC

Architect Population in Myanmar		
1920	1	(first Myanmar Architect)
1948	6	(Past Independence architects)
1962	28	(Architects graduated from BOC College)
1979	224	Architecture Silver Jubilee
2004	804	Architecture Golden Jubilee
2020	2200+	

As of Feb 2020		
RA	Registered Architect	1058
LA	Licensed Architect	477
SLA	Senior Licensed Architect	237
	Total	1771

Source ; MAC

**Yangon City Development Committee (YCDC)
Licensed Engineers (31.3.2018)**

1	Senior License Engineer (LS)	2,555
2	Junior License Engineer (JLS)	1,066
		3,621
3	Structure Engineer Certificate (SEC)	246
4	Accredited Checker (AC)	24
		270

Source ; YCDC

Note: Starting from 1.4.2018 only the engineers certified by MEngC are allowed.

List of Buildings permitted by YCDC

YEAR	Under 3 storeyed	4 to 8 storeyed	Above 9 storeyed	Total
2015	3240	3384	33	6657
2016	2321	1381	35	3737
2017	3118	800	45	3963
2018	3268	932	25	4225
2019	3904	752	17	4673
2020 (up to April)	1407	247	6	1660

Source ; YCDC

Myanmar National Building Code (MNBC)

- The Exercise for Setting up Myanmar National Building Code (MNBC) had been initiated since 2011 by MES along with Ministry of Construction with the support from UN Habitat.
- The MNBC First draft had been completed since 2012 and now under updating process to meet the recent technology updates as well as covering all necessary aspects of building works such as Electrical Works, Fire safety
- It has been drawn up to ensure compliance with the best practices of the International Building Code, the American Society of Civil Engineers, and British and Indian standards, in order not to reinventing the wheel.
- The Myanmar code has taken account of international norms and then adapted them to fit the geography of the country, as well as the building materials available to us and the hazards that are specific to Myanmar
- MNBC 2016 revision is currently in use and 2020 version will be out soon.

Conclusion

- There were partial collapse of some buildings during May and June of this year at some part of Yangon. Those buildings were constructed during the early period of contract housing era in early 1990s. At that time, control of regulations were very weak, and contractors used the license engineers for Chopping their signatures on the drawings during permit process only and contractors themselves manage or supervise the construction process without acknowledging the knowledge and capabilities of Engineers. YCDC also couldn't strict on the regulations due to the weak administration system.
- Myanmar Construction Entrepreneurs Association have been established in 1996 with the aim to control the quality and systems of the construction works. The MCEA is successfully implementing their tasks since then.
- Myanmar Licensed Contractors Association was established in 2016 with the similar drives.

- At this point of time, the concerned authorities check the design calculations at step by steps. Buildings over 12 stories and above follows the guidelines from HPBC (High-Rise and Public Building Projects Committee), not only in design stage, but also thorough out the Construction Process.
- Buildings up to 8 ½ stories were checked and approved by YCDC (in case of Yangon), 9 to 12 stories building need approval from HIC, then over 12 stories need to go to HPBC.
- However, if we compare with other developing countries, Myanmar's Construction sector is still lagging and we need to improve our systems. Need to promulgate Building Control Acts and Regulations.
- Understand that Ministry of Construction is drafting the Rules for the Development of Construction Industry, which needs to go step by step with the proper judgment and decision to move on the right path.
- For achieving Improvement in the Industry, the collective participations all stakeholders such as Authority, Professional, Clients, Inspectors, Contractors, Sub-contractor, Suppliers etc. is vital important .
- Cooperation between Authority, Institutions and Associations seems very important for the changes.

Thank You