ISO 16813:2024-11 (E)

Building environment design - Indoor environment - General principles

Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Fundamentals **2**

4.1 General 2

4.2 Building environment parameters and variables 3

4.3 Project team 4

4.3.1 Design team 4

4.3.2 Construction team 4

4.3.3 Commissioning team 4

4.4 Project information 4

4.5 Framework of generation and verification 4

4.6 Framework of documentation at approval 5

4.7 Harmonization of architectural and building system design 5

4.8 Commissioning 5

4.9 Post-occupancy evaluation (POE) 6

4.10 Commissioning issues and lessons learned 6

5 Design process **6**

5.1 Stage I — Formulation of project definition 6

5.1.1 General 6

5.1.2 Project definition 6

5.1.3 Opportunities and constraints 6

5.1.4 Requirements 6

5.1.5 Assumptions 7

5.1.6 Philosophy, ethics and theories 7

5.1.7 Output — Document I 7

5.1.8 Evaluation I 7

5.1.9 Output — Approval of Document I 7

5.1.10 Iteration 7

5.2 Stage II — Schematic design 7

5.2.1 General 7

5.2.2 Input — Background 7

5.2.3 Output — Document II 8

5.2.4 Evaluation II 8

5.2.5 Output — Approval of Document II 8

5.2.6 Iteration from conceptual design and schematic design 8

5.2.7 Iteration from project definition 8

5.3 Stage III — Detailed design 8

5.3.1 General 8

5.3.2 Input — Background 9

5.3.3 Output — Document IIIa 9

5.3.4 Analysis 9

5.3.5 Output — Document IIIb 9

5.3.6 Evaluation III 9

5.3.7 Output — Approval of Documents IIIa and IIIb 9

5.3.8 Iteration into detail design 9

5.4 Stage IV — Final design 10
5.4.1 General 10
5.4.2 Output — Final design document 10
5.5 End of design 10
5.6 Construction and handover 10
6 Development of design criteria **10**
7 Development of design aids **10**
8 Cost evaluation **10**
8.1 Estimation of primary costs 10
8.2 Evaluation of design benefits versus costs as required by the client 11
8.3 Compliance review 11
Annex A (informative) **Flow diagram of the design process** **12**
Annex B (informative) **Building environment parameters and variables** **14**
Bibliography **15**