

# ISO 16813:2024-11 (E)

## Building environment design - Indoor environment - General principles

---

### Contents

Page

Foreword	v
Introduction	vi
<b>1 Scope</b>	<b>1</b>
<b>2 Normative references</b>	<b>1</b>
<b>3 Terms and definitions</b>	<b>1</b>
<b>4 Fundamentals</b>	<b>2</b>
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
<b>5 Design process</b>	<b>6</b>
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
<b>6</b>	<b>Development of design criteria.....</b>	<b>10</b>
<b>7</b>	<b>Development of design aids.....</b>	<b>10</b>
<b>8</b>	<b>Cost evaluation.....</b>	<b>10</b>
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
<b>Annex A (informative) Flow diagram of the design process.....</b>		<b>12</b>
<b>Annex B (informative) Building environment parameters and variables.....</b>		<b>14</b>
<b>Bibliography.....</b>		<b>15</b>