Model Format for Building Services Specifications

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Making buildings better...

A small digression

BIM

• 3D models
• Reports
• Surveys
• Drawing
• Specifications

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Background to BG 56

• Late 2013 – BSRIA attended a BESA regional event
• Specifications arguably single most important document constructors receive on a project
   • Basis of understanding
   • What they were required to price
   • What to deliver
• Suggested a model format for all to use
• Involve both parties in determining the format:
  – those who produce the specification
  – those who receive the specification

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Shaping the requirement

• Requirement: Produce a structure to support working practices
  – Recognise different people require different levels of information at different times
• Not based on existing classification structure
  – CAWS (common arrangement of work sections) and Uniclass 2
  – Present the information in the format required, not as the classification structure dictates
• BG 56 provides general headings in a ‘standard’ order
  – Users can provide own content to populate
  – Used for any project

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What is a specification

Cambridge Dictionaries Online definition.....
‘a detailed description of how something should be done, made, etc’

For construction.....

For a designer to convey information on the design of various aspects of the project to the installer
What is a specification

Minimum requirements:
- What the project comprises
- Design criteria and performance requirements
- Descriptions of the systems
- How the systems are to work
- Details of the plant and equipment to be provided

What is a specification

Minimum requirements:
- Details of relevant specialist works

What is a specification

Minimum requirements:
- How the plant, equipment and systems are to be installed
- Quantities of plant and equipment
- The arrangement of plant, equipment and systems

What is a specification

Minimum requirements:
- Controls descriptions and descriptions of operation
- Requirements and information for operation of systems
- Data for commissioning

The specification has many uses

- Prior to tendering, can be used to demonstrate compliance with the clients requirements
- To describe the works to the tenderer/contractor
- A reference source in case of conflict, or to prove clarity over a technical issue
- Read at the start and then referred to as needed throughout the contract
- Distribute various sections amongst sub-contractors
- Retained as a reference source after the works, to inform future projects
Common component parts?

- Preliminaries
  - General contract conditions and legal issues
  - No technical information
- Materials and workmanship
  - Way plant/systems should be installed
  - Quality of plant and materials
- Project specific requirements
  - Location, general description, design criteria, system descriptions, operation, control strategies
- Project specific material and equipment
  - Detailed information on plant and equipment
  - Can be in form of schedules
  - Quantities, performance data, manufacturers’ references etc.

How is it arranged?

2 Common approaches:

1. By parts

   Preliminaries
   - Project specific requirements
   - Materials and workmanship
   - Project specific material and equipment

2. By work section or system – based on Common Arrangement of Work Sections (CAWS)

   Used for many specification compilation tools

Preparing Effective Specifications

1. Use plain language
2. Know what you want
3. Be specific – state clearly the requirements / responsibilities
4. ‘Cut and paste’ with care – use master specification
5. Use the correct level of detail
6. Put information in the right place
7. Ensure compliance
8. Ensure consistency – within document and others
Preparing Effective Specifications

9. Look from the user’s viewpoint
10. Use imperative tense
   - “The system shall be installed….” ×
   - “Install the system….” ✓
11. Avoid unnecessary duplication
12. Avoid unnecessary content
   - No need to restate that tender/constructor is responsible for the specified work; address in preliminaries
13. Keep consistent numbering
14. Roles and responsibilities addressed
15. Check client requirements – checked for technical suitability

Model specification format

Part A: Preliminaries/contract conditions
Part B: Project specific requirements
Part C: Project specific materials and equipment
Part D: Common workmanship and materials
Part E: Tender deliverables

Key driver – few parts as possible
Part D

• For generic equipment used for most projects – typically not project specific
• May require little or no editing
• Project specific selection still need to be made clear
• May refer to codes and standards to express quality threshold
• May refer to industry best-practice publications

Part E

• Documents required to be submitted by tenderer
• More than just the tender pricing document
• Helpful if pricing aligned with the parts of the specification

Summary

• A model format for building services specifications
• Benefits anyone who prepares or receives a specification
• The specification has several uses
• Consider the users’ perspective
• Copy and paste with care

Thank you

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