

# Value Engineering Checklist

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## Project Definition & Goals

Ensuring a clear understanding of project objectives, constraints, and key performance indicators (KPIs) is paramount for effective value engineering.

### Project Goals & Objectives (Detailed)

Write something...

### Initial Budget Estimate

Enter a number...



### Projected ROI (Return on Investment)

Enter a number...

### Key Stakeholder Expectations & Priorities

Write something...

### Project Delivery Method (e.g., Design-Bid-Build, Design-Build, CM at Risk)

- Design-Bid-Build
- Design-Build
- CM at Risk
- Integrated Project Delivery (IPD)

### Original Project Completion Date

Enter date...

### Primary Performance Indicators (KPIs) for Success

Write something...

### Constraints & Limitations (e.g., Site Restrictions, Regulatory Requirements)

Write something...

# Design & Planning

Reviewing design decisions, specifications, and planning processes to identify potential areas for optimization and simplification.

**Describe the initial design concept and its key assumptions.**

Write something...

**Were BIM (Building Information Modeling) techniques utilized in the design phase?**

- Yes
- No
- Partially

**Estimate of initial design hours spent.**

Enter a number...

**Which design alternatives were considered (if any)?**

- Alternative Foundation Designs
- Alternative Structural Systems
- Different Material Choices
- Modified Architectural Layout
- Pre-engineered components
- None

**Summarize the rationale for the chosen design approach compared to alternatives.**

Write something...

**Were standard or repetitive design elements leveraged?**

- Yes
- No

**Document any areas where design simplification was initially resisted, and why.**

Write something...

**Date of latest design review**

Enter date...

## Materials & Components

Analyzing material selections, considering alternatives, and assessing their cost, performance, and sustainability impact.

### Standard Concrete Mix Design?

- Yes - Meets Requirements
- No - Potential for Optimization

### Current Steel Grade (e.g., ASTM A36)

Enter a number...

### Alternative Steel Grades Considered?

- No
- Yes - Investigated for Cost Savings

### Description of Alternative Material Options

Write something...

### Estimated Cost Savings (Alternative Materials)

Enter a number...

## Material Specification Sheets (Alternatives)

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### Which materials could be substituted for cost or performance improvements?

- Concrete
- Steel
- Wood
- Insulation
- Roofing

## Construction Methods

Evaluating construction sequencing, techniques, and equipment to identify opportunities for efficiency and reduced labor costs.

### Construction Sequencing Review

- Current Sequencing Reviewed
- Alternative Sequencing Considered
- No Changes Required

### Describe Potential Prefabrication Opportunities

Write something...

### Estimated Labor Hours Savings (if applicable)

Enter a number...

### Construction Techniques Evaluated

- Lean Construction Principles
- Building Information Modeling (BIM)
- Modular Construction
- 3D Printing
- Improved Site Logistics
- None

### Equipment Utilization Review

- Optimal Equipment Utilization
- Equipment Rental Cost Analysis
- Alternative Equipment Considered
- Equipment Efficiency Improvements Implemented

### Document any changes in Construction Methodology

Write something...

# Subcontractor Selection & Management

Reviewing subcontractor bids, contracts, and performance to ensure value and mitigate risks.

## Bidding Process Adequacy?

- Fully Competitive Bidding
- Limited Bidding
- Sole Source Justification Required

## Number of Bids Received

Enter a number...

## Justification for Sole Source Selection (if applicable)

Write something...

## Subcontractor Pre-Qualification Status?

- Fully Pre-Qualified
- Requires Further Review
- Not Pre-Qualified

## Subcontractor Insurance Certificates

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## Summary of Subcontractor's Past Performance

Write something...

## Subcontractor's Bid Price

Enter a number...

## Contract Type?

- Fixed Price
- Cost-Plus
- Time and Materials

# Systems Integration

Examining the interaction of different building systems (HVAC, electrical, plumbing, etc.) for potential synergies and cost savings.

## Describe current coordination practices between HVAC, Electrical, and Plumbing systems.

Write something...

**Are BIM (Building Information Modeling) tools being utilized for systems coordination? If so, which ones?**

- Yes, Revit
- Yes, ArchiCAD
- Yes, Navisworks
- Yes, Other (Specify in Long Text)
- No

**Estimated reduction in clashes/conflicts through improved systems coordination (percentage).**

Enter a number...

**Which potential integration challenges have been identified?**

- Space Constraints
- Equipment Accessibility
- Noise & Vibration
- Aesthetics
- Code Compliance
- Other (Specify in Long Text)

**Describe any proposed alternative routing or integration methods for utilities to minimize conflicts.**

Write something...

**Is a centralized systems coordination meeting schedule in place? If so, how often?**

- Weekly
- Bi-weekly
- Monthly
- No defined schedule

## Life Cycle Cost Analysis

Considering the total cost of ownership, including initial cost, maintenance, operations, and eventual decommissioning.

**Estimated Initial Construction Cost**

Enter a number...

**Estimated Annual Maintenance Cost (Year 1)**

Enter a number...

**Estimated Annual Operating Cost (Energy, Water, etc. - Year 1)**

Enter a number...

**Estimated Annual Insurance Cost**

Enter a number...

**Estimated Annual Property Tax Cost**

Enter a number...

**Estimated Discount Rate (for Present Value Calculation)**

Enter a number...

**Projected Life Span (Years)**

Enter a number...

**Assumptions Used for Life Cycle Cost Estimates (e.g., Inflation Rates, Future Operating Costs)**

Write something...

# Sustainability & Environmental Impact

Identifying opportunities to reduce environmental impact, improve energy efficiency, and enhance building performance.

## Are recycled content materials prioritized?

- Yes
- No
- Partial/Considered

## Target U-value for building envelope (W/m<sup>2</sup>·K)

Enter a number...

## Which sustainable strategies are being considered?

- Solar Panel Integration
- Rainwater Harvesting
- Green Roof Implementation
- Passive Ventilation Design
- Low-VOC Materials

## Description of efforts to minimize construction waste.

Write something...

**Is a LEED or other green building certification being pursued?**

Yes

No

Considering

**Estimated reduction in energy consumption (percentage)**

Enter a number...

**Details regarding the sourcing of sustainable materials (e.g., local suppliers, certifications).**

Write something...

## **Risk Assessment & Mitigation**

Identifying potential risks that could impact cost, schedule, or quality, and developing strategies to mitigate them.

**Identify Potential Risks (Cost, Schedule, Quality, Safety)**

Write something...

### Estimated Cost Impact of Each Risk (€)

Enter a number...

### Risk Category (Cost, Schedule, Quality, Safety, Environmental)

- Cost
- Schedule
- Quality
- Safety
- Environmental

### Potential Mitigation Strategies

- Contingency Planning
- Value Engineering
- Alternative Materials
- Improved Communication
- Phased Construction
- Early Procurement

### Risk Priority (High, Medium, Low)

- High
- Medium
- Low

### Target Mitigation Completion Date

Enter date...

### Detailed Description of Proposed Mitigation Action

Write something...

### Responsible Party for Mitigation

Write something...

### Risk Status (Open, In Progress, Closed)

- Open
- In Progress
- Closed

## Procurement & Contract Management

Evaluating procurement strategies, contract terms, and payment schedules to optimize value and minimize disputes.

### Procurement Strategy Selected?

- Competitive Bidding
- Negotiated Bid
- Design-Build
- Fast-Track

### Summary of Bidder Evaluation Criteria

Write something...

### Number of Bids Received

Enter a number...

### Contract Type

- Fixed Price
- Cost-Plus
- Time & Materials
- Unit Price

### Key Contractual Risks Identified & Mitigation Plans

Write something...

### Bid Due Date

Enter date...

## Upload Key Bid Documents (e.g., Bid Sheets, Qualification Statements)

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## Payment Schedule Type?

- Progress Payments
- Milestone-Based
- Lump Sum