THE COST OF THE WORK

CONTENTS

contract administration | the cost of the WORK

TOOLS TO MANAGE THE CONSTRUCTION COST

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how to use alternates, allowances, and unit prices to manage costs, protect your design, eliminate risk, and become more efficient

GENERAL DEFINITIONS

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THE CONTRACT DOCUMENTS

Owner - Contractor Contract

The Contract for Construction includes the following documents:

- The Agreement.
- The General Conditions of the Contract.
- The Drawings.
- The Specifications.
- If a bidding process took place, the Contract includes the changes to the documents made during the Bidding Process.
- Other items if agreed by the Contractor and the Owner.

GENERAL DEFINITIONS

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THE WORK

Owner - Contractor Contract

AS defined by the AIA A201 “General Conditions of the Contract for Construction”

- “The **construction and the services** required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provide or to be provided by the Contractor to fulfill the Contractor’s obligations. The Work may constitute the **whole or part** of the Project.

GENERAL DEFINITIONS

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THE CONTRACT TIME

Owner - Contractor Contract

The period of time, including authorized adjustments, allotted in the Contract Documents for **Substantial Completion** of the Work.

- The date of commencement of the Work is the date established in the Agreement or in the Notice to Proceed.
- The term “day”, means **calendar** day.

The date of Substantial Completion is the date certified by the Architect in accordance with the General Conditions.

GENERAL DEFINITIONS

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THE CONTRACT SUM

Owner - Contractor Contract

- Is the amount stated in the Agreement, and including authorized adjustments.
- The CONTRACT SUM is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Document.

ALTERNATES

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DEFINITION

ALTERNATE WORK

ALTERNATE is an amount proposed by the bidders or the Contractor - as stated in the Bid Form or in a separate form - for ALTERNATE work identified in the documents as such. The ALTERNATE may:

- Describe work that will replace a portion of the work in the Contract (DO THIS INSTEAD OF THAT)
- Describe work to be added to the Contract (DO THIS)
- Describe work to be deleted from the Contract (DO NOT DO THIS)

The cost of the Alternate is added or deducted from the Contract Sum when the Alternate is accepted by the Owner.

ALTERNATES

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CONSIDERATIONS

ALTERNATE WORK

- ALTERNATES impact the project in other areas besides costs, i.e:
  - The Project Schedule.
  - Use of the space.
  - Additional requirements (permits, insurance, testing, modifications to the design, installation, etc.)
  - New subcontractors, depends on availability of products, etc.
- ALWAYS discuss Alternates with the Owner. The Owner should understand the implications. WHY?

ALTERNATES

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DOCUMENTATION

ALTERNATE WORK

- DO NOT label Alternates as “ADD” or “DEDUCTIVE”.
- AVOID Alternates that depend on other Alternates, conflicting Alternates, and deductive Alternates.
  - Contractors do not want to loose overhead and profit margins on work they have bid but that might be omitted from a project.
- Consider the cost to the Contractor for preparing alternates.
- Consider using alternates to avoid “bid shopping” (price negotiating after contract is signed).
- Alternates increase the liability of the Architect. WHY?

ALTERNATES

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DOCUMENTATION

ALTERNATE WORK

SCHEDULE ALTERNATES: ALTERNATE #1, #2, etc.

- Record both the Base Bid Work and the Alternate work:
  - Base Bid: Provide A.
  - Alternate: Provide B.
- Alternate work needs to be fully described in the Drawings and the Specifications, i.e, new details, new section, etc.
- The specs include the administrative procedures for alternates and a schedule of alternates in Division 01.
- COORDINATE. WHY?

ALLOWANCES

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DEFINITION

ALLOWANCE WORK

Allowances are established in lieu of portions of work of which there is insufficient information to so that portion of the work is deferred to a later date when additional information is available for evaluation. Allowance are:

- LUMP SUM
- UNIT COST
- CONTINGENCY
- TESTING AND INSPECTING
- QUANTITY

ALLOWANCES

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LUMP SUM

MOST COMMON TYPE

- INFORMATION you need: Unit price and quantity needed.
- Use for single-unit, large-dollar-value items.
  - For small amounts, the cost of administration may exceed the amount in the allowance.
- Use a lump-sum allowance if the actual quantity of units can be determined easily; if not, use a unit-price allowance

EXAMPLE - An instance in which a lump sum is appropriate.

ALLOWANCES

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CONTINGENCY

For covering unexpected problems, like existing conditions, weather delays, etc.

- Use when the scope of work is unknown.
- Include allowance for errors and omissions by architect in all contracts.
- Limit the stated allowance amount to the purchase price.
  - Standard contracts include delivery, storage, handling, taxes, and installation as part of the Contract Sum, not as part of the allowance.

Give EXAMPLES in which using an contingency allowance is appropriate.

ALLOWANCES

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UNIT COST

Effective on projects that include many identical units of a product.

- If you cannot have more precise information, decide on a suitable monetary value for a single unit, usually at midpoint of the price range.
- The contractor determines the quantity from the documents.
- Do not use this type of ALLOWANCE for items that cannot be quantified or measured in units.

Give EXAMPLES in which using an UNIT COST allowance is appropriate.

ALLOWANCES

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CONSIDERATIONS

WORK UNDER ALLOWANCES

- Avoid ALLOWANCES whenever possible. They probably will:
  - Increase costs.
  - Impact the project schedule.
- The time between the procurement of the work under the allowance and its acceptance might cause problems.
- Missing or erroneous information will add to the cost.
- Allowances have legal implications.
- Allowances increase the liability of the Architect. WHY?

ALLOWANCES

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DOCUMENTATION

WORK UNDER THE ALLOWANCE

SCHEDULE ALLOWANCES: Allowance #1, #2, etc.

- Work under the allowance needs to be fully described in the Drawings and the Specifications, i.e, new details, new section, etc.
- The specs include the administrative procedures for allowances and a schedule of allowances in the “ALLOWANCES” Section in Division 01.
- COORDINATE. WHY?

UNIT PRICES

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DEFINITION

MOST COMMON TYPE

- Unit price is an amount proposed by bidders (contractors), stated on the Bid Form (or other form) as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased..
- Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

EXAMPLE - An instance in which a lump sum is appropriate.

UNIT PRICES

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CONSIDERATIONS

When and why are used.

- Unit prices are used when the architect knows that there is a strong probability additional work will be needed but cannot describe the nature and quality of unexpected work.
- If there is not enough information for a Contractor to propose a cost protection, unit prices:
  - Protect the Owner and the Contractor;
  - Provide the necessary provisions to pay for performing such work.
  - Reduce the Architect’s liability. WHY?

UNIT PRICES

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CONSIDERATIONS

When and why are used.

- Examples of when to use unit prices:
  - Unknown conditions, such as length of piles.
  - Over-excavation.
  - Renovation work: Cleaning terracota units.
  - Future work: Electric services when layout of furniture is not complete.
  - Utilities. WHY?

EXAMPLE - An instance in which the use of unit prices is appropriate.

UNIT PRICES

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DOCUMENTATION

Asking for Unit Prices

SCHEDULE UNIT PRICES: Unit Price #1, #2, etc.

- Work covered by the Unit Price quoted needs to be fully described in the Drawings and the Specifications, i.e.
- Before requesting Unit Prices, make sure the quantification or measurement can be done from the information in our documents.
- The scope of what is covered in the Unit Price should be clear.
- The specs include the administrative procedures for UNIT PRICES and a schedule of unit prices in the “UNIT PRICES” Section in Division 01.

PAYMENTS TO THE CONTRACTOR

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THE Schedule of Values

Owner - Contractor Contract

The Contract requires the Contractor to submit a Schedule of Values.

- The SOV allocates values to the different components of the Work;
- As the work progresses, applications for payment covering the cost of the completed portions are issued by the Contractor for review by the Architect and payment by the Owner.
- The level of detail of the SOV depends on the Project.
- In projects with a CM, the CM reviews the SOV with the Architect.
- The SOV can be omitted in small projects.
- Helps tracking Contractor’s expenses to avoid “front end loading”.

PAYMENTS TO THE CONTRACTOR

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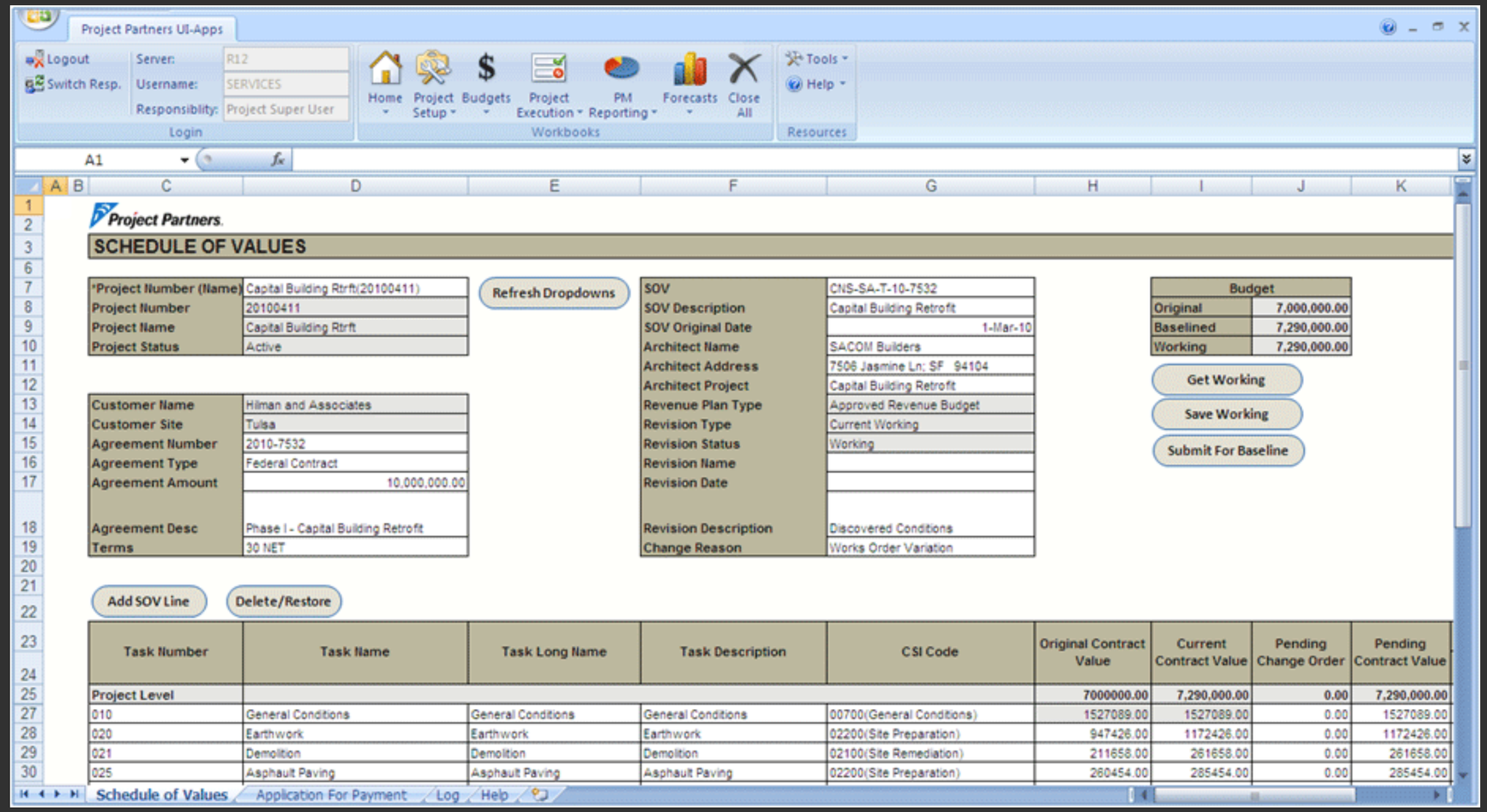

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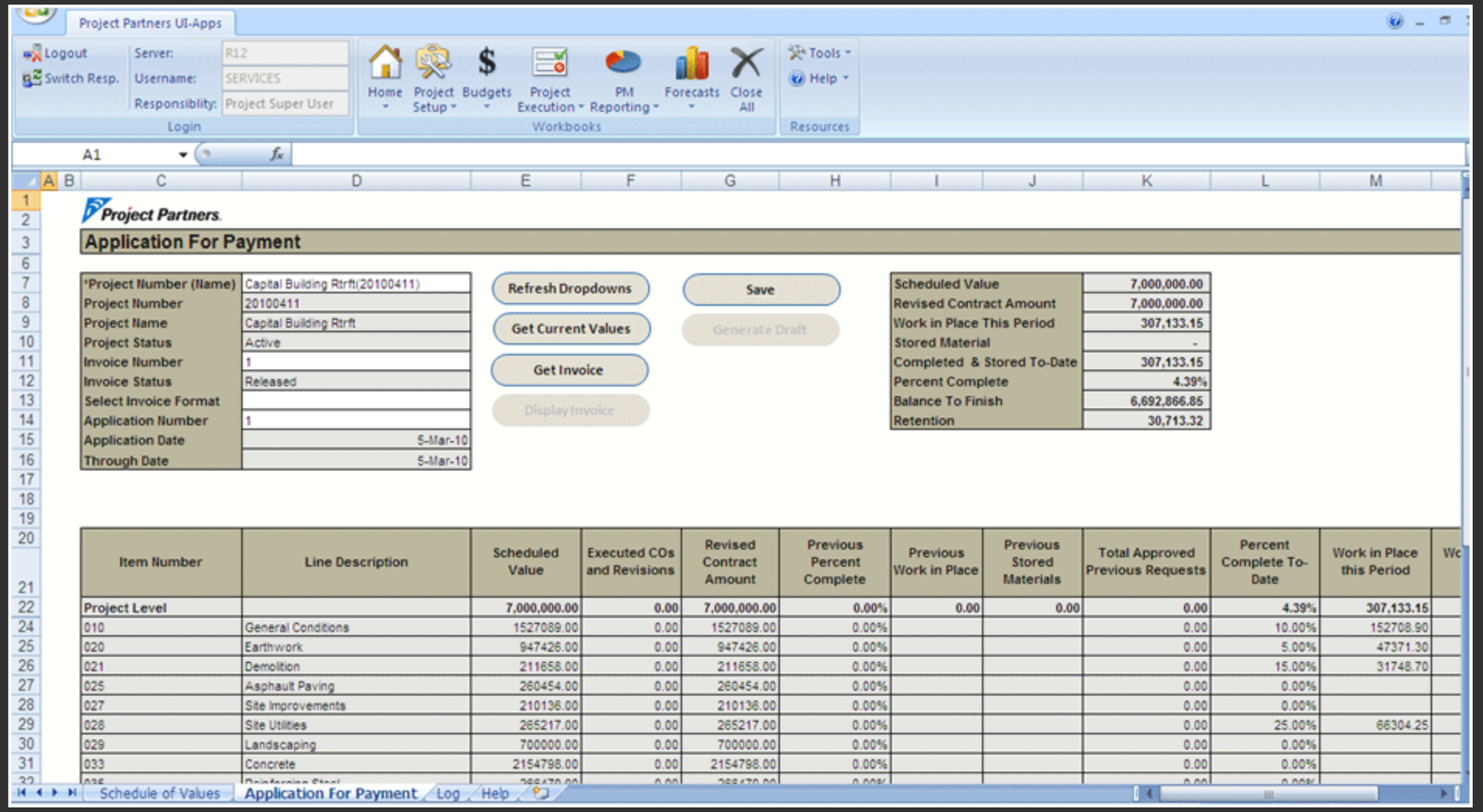

PAYMENTS TO THE CONTRACTOR

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THE Payment Process

Owner - Contractor Contract

The Payment Process is controlled by the Architect, CM, or another Owner’s Representative and the lending institution.

- The Contractor reports on the Work’s progress and submits the Application for Payment.
- The entity responsible certifies, based on on-site observations, that the work claimed has be performed and payment is justified.
- The standard duration for submitting Applications for Payment is ONE MONTH.
- Do not delay review of Applications for Payment.

PAYMENTS TO THE CONTRACTOR

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THE Payment Process

Owner - Contractor Contract

All we are required to do in a “standard” contract is to “observe the work”. Payment should be ask for:

- Work completed, in place.
- Products properly stored on site.
- Services (includes extra documentation for LEED and other processes approved by Owner).
- Payment includes overhead costs, insurance, storage, handling, transportation, taxes, etc.

PAYMENTS TO THE CONTRACTOR

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THE Payment Process

Owner - Contractor Contract

Contractor’s Responsibilities:

- Submit the Application for Payment in time.
- Submit required additional documentation (usually at the first and last Applications for Payment.
  - Use standard forms because non-standard forms increase liability.
  - Standard forms are issued by the AIA, EJCDC, government agencies, large owners, financial institutions, large contractors.

PAYMENTS TO THE CONTRACTOR

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THE Payment Process

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KABUKI

Intangible Cultural Heritage - UNESCO I Triptych woodblock print by Utagawa Toyokuni, 1858

KABUKI

Intangible Cultural Heritage - UNESCO I 400 years old

Two actors by Shark, 1794

KABUKI

Intangible Cultural Heritage - UNESCO I Azuka kabuki in NY

KABUKI

Intangible Cultural Heritage - UNESCO I 400 years old

KABUKI

Shakkyo” (Stone bridge) by Kyozo Nakamura and Matsugoro Onoe I Embassy of Japan in Israel

KABUKI

Intangible Cultural Heritage - UNESCO I 400 years old

KABUKI

Intangible Cultural Heritage - UNESCO I 400 years old