

# RMW Architecture & Interiors

C505

Managing the Cost of the Work1

RMWT3 Cost1

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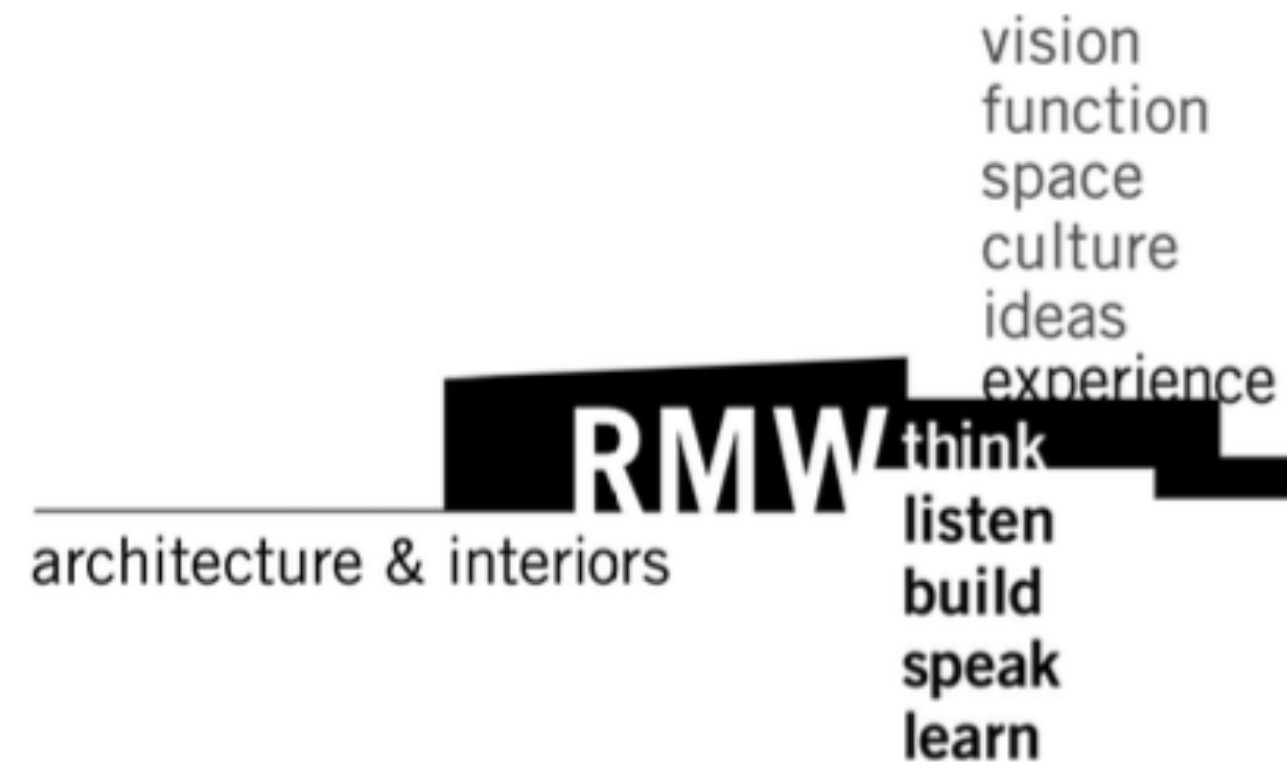
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Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.



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# Course Description

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The contents of the course are as follows:

- Definition of alternates, allowances, and unit prices.
- How to use alternates, allowances, and unit prices to manage costs, protect your design, eliminate risk, and help the project's design and CA become more efficient.

# Learning Objectives

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At the end of the this course, participants will be able to:

1. Become familiar with the definitions of and properties of the terms “Contract Documents,” “The Work,” “Cost of the Work,” “Allowances, Unit Prices, and Alternates”.
2. Become familiar with the purpose of allowances, unit prices, and alternates, and their use in the construction contract.
3. Recognize the possible risks incurred when using allowances, unit prices, and alternates.
4. Explore the different manners in which the use of allowances, unit prices, and alternates helps control the costs and protect the design.

# THE COST OF THE WORK

ALTERNATES | ALLOWANCES | UNIT PRICES

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# CONTENTS

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DEFINITIONS

ALTERNATES

ALLOWANCES

UNIT PRICES

APPLICATIONS FOR PAYMENT

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

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

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

- “The Work includes the **construction and the services** required by the Contract Documents, whether completed or partially completed, including 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

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

- The CONTRACT SUM is the amount stated in the Agreement, 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 Documents.
- The CONTRACT SUM cannot be modified without the written agreement of the Owner and the Contractor.

# ALTERNATES

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## DEFINITION

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 describes work that:

- Will replace part of the work in the Contract (DO THIS INSTEAD OF THAT)
- To be added to the Contract (DO THIS)
- To be deleted from the Contract (DO NOT DO THIS)

The amount 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

ALTERNATES impact the project in other areas besides costs.

- 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 important Alternates with the Owner. The Owner should understand the implications.

# ALTERNATES

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## DOCUMENTATION

- 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 lose 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.

# ALTERNATES

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## DOCUMENTATION

**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!!!!**

# ALLOWANCES

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## DEFINITION

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

the MOST COMMON TYPE OF UNIT PRICES

- The INFORMATION you need to set up a Lump Sum Allowance is:
  - Unit price of the item covered and
  - quantity needed.
- Use lump sum allowances for single-unit, large-dollar-value items.
  - **BEWARE** - For small amounts, the cost of administration may exceed the amount in the allowance.
- Use a lump-sum allowance ONLY if the actual quantity of units can be determined easily; if not, use a **unit-price allowance**.

# ALLOWANCES

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## CONTINGENCY allowances

This type of allowance is used for covering unexpected problems, such as existing conditions, weather delays, etc.

- Use when the scope of work is unknown.
- RMW contracts include a contingency allowance for errors and omissions by us.

# ALLOWANCES

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## UNIT COST

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

Use when do not have 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.

# ALLOWANCES

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## CONSIDERATIONS

- **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.

# ALLOWANCES

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## DOCUMENTATION

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!!!**

# UNIT PRICES

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## DEFINITION

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, unit prices:
  - Protect the Owner and the Contractor;
  - Provide the necessary provisions to pay for performing such work.
  - Reduce the Architect's liability.

# 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 terracotta units.
- Future work: Electric services when layout of furniture is not complete.
- Utilities.



# UNIT PRICES

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## DOCUMENTATION

**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.
- **COORDINATE!!!!!!**

# CONTRACT ADMINISTRATION

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## THINK AS DESIGNERS

### ORGANIZE YOUR INFORMATION

- YOUR TOOLS ARE THE DOCUMENTS
- YOUR TIME IS WHAT YOU CAN SPENT
- YOUR HOW TO IS IN THE DOCUMENS

### OWN THE PROCESS

### CONSIDER THE CONTRACTOR'S WORK

- Be a team member

# PAYMENTS TO THE CONTRACTOR

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## THE Schedule of Values

The Contract requires the Contractor to submit a Schedule of Values (SOV)

- 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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Project Partners UI-Apps

Logout | Server: R12 | Switch Resp. | Username: SERVICES | Responsibility: Project Super User | Login

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**Project Partners**

## SCHEDULE OF VALUES

*Project Number (Name)	Capital Building Rtrft(20100411)	Refresh Dropdowns	SOV	CNS-SA-T-10-7532	Budget			
Project Number	20100411		SOV Description	Capital Building Retrofit	Original	7,000,000.00		
Project Name	Capital Building Rtrft		SOV Original Date	1-Mar-10	Baselined	7,290,000.00		
Project Status	Active		Architect Name	SACOM Builders	Working	7,290,000.00		
Customer Name	Hilman and Associates		Architect Address	7506 Jasmine Ln; SF 94104	Get Working			
Customer Site	Tulsa		Architect Project	Capital Building Retrofit	Save Working			
Agreement Number	2010-7532		Revenue Plan Type	Approved Revenue Budget	Submit For Baseline			
Agreement Type	Federal Contract		Revision Type	Current Working				
Agreement Amount	10,000,000.00		Revision Status	Working				
Agreement Desc	Phase I - Capital Building Retrofit		Revision Name					
Terms	30 NET		Revision Date					
			Revision Description	Discovered Conditions				
			Change Reason	Works Order Variation				

Add SOV Line | Delete/Restore

Task Number	Task Name	Task Long Name	Task Description	CSI Code	Original Contract Value	Current Contract Value	Pending Change Order	Pending Contract Value
Project Level					7000000.00	7,290,000.00	0.00	7,290,000.00
010	General Conditions	General Conditions	General Conditions	00700(General Conditions)	1527089.00	1527089.00	0.00	1527089.00
020	Earthwork	Earthwork	Earthwork	02200(Site Preparation)	947426.00	1172426.00	0.00	1172426.00
021	Demolition	Demolition	Demolition	02100(Site Remediation)	211658.00	261658.00	0.00	261658.00
025	Asphalt Paving	Asphalt Paving	Asphalt Paving	02200(Site Preparation)	260454.00	285454.00	0.00	285454.00

Schedule of Values | Application For Payment | Log | Help

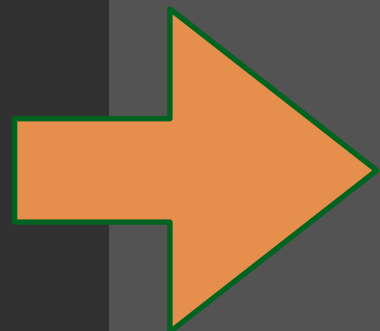
# PAYMENTS TO THE CONTRACTOR

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## THE Payment Process

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 been 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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A1

**Project Partners**

### Application For Payment

*Project Number (Name)	Capital Building Rtrft(20100411)	Refresh Dropdowns	Save	Scheduled Value	7,000,000.00
Project Number	20100411	Get Current Values	Generate Draft	Revised Contract Amount	7,000,000.00
Project Name	Capital Building Rtrft	Get Invoice		Work in Place This Period	307,133.15
Project Status	Active	Display Invoice		Stored Material	-
Invoice Number	1			Completed & Stored To-Date	307,133.15
Invoice Status	Released			Percent Complete	4.39%
Select Invoice Format				Balance To Finish	6,692,866.85
Application Number	1			Retention	30,713.32
Application Date	5-Mar-10				
Through Date	5-Mar-10				

Item Number	Line Description	Scheduled Value	Executed COs and Revisions	Revised Contract Amount	Previous Percent Complete	Previous Work in Place	Previous Stored Materials	Total Approved Previous Requests	Percent Complete To-Date	Work in Place this Period
<b>Project Level</b>		<b>7,000,000.00</b>	<b>0.00</b>	<b>7,000,000.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.39%</b>	<b>307,133.15</b>
010	General Conditions	1527089.00	0.00	1527089.00	0.00%			0.00	10.00%	152708.90
020	Earthwork	947426.00	0.00	947426.00	0.00%			0.00	5.00%	47371.30
021	Demolition	211658.00	0.00	211658.00	0.00%			0.00	15.00%	31748.70
025	Asphalt Paving	260454.00	0.00	260454.00	0.00%			0.00	0.00%	
027	Site Improvements	210136.00	0.00	210136.00	0.00%			0.00	0.00%	
028	Site Utilities	265217.00	0.00	265217.00	0.00%			0.00	25.00%	66304.25
029	Landscaping	700000.00	0.00	700000.00	0.00%			0.00	0.00%	
033	Concrete	2154798.00	0.00	2154798.00	0.00%			0.00	0.00%	

Schedule of Values | Application For Payment | Log | Help

# PAYMENTS TO THE CONTRACTOR

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## THE Payment Process

All we are required to do in a “standard” contract is to “observe the work”.

Payment should be ask for:

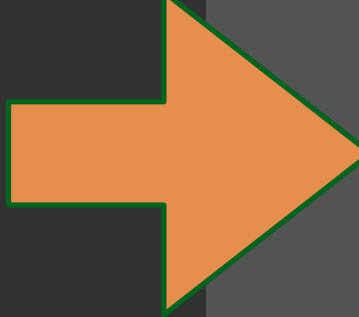
- Work completed, in place.
- Products properly stored on site.
- Services (includes extra documentation for LEED and other processes approved by Owner).
- Payment includes overhead costs, insurance, storage, handling, transportation, taxes, etc.

# PAYMENTS TO THE CONTRACTOR

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## THE Payment Process

### 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, and large contractors.



# PAYMENTS TO THE CONTRACTOR

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## THE Payment Process

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.
- Contract administration services (includes extra documentation for LEED and other processes approved by Owner).
- Payment includes overhead costs, insurance, storage, handling, transportation, taxes, etc.



# This concludes The American Institute of Architects Continuing Education Systems Course

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vision  
function  
space  
culture  
ideas  
experience

**RMW** think  
listen  
build  
speak  
learn

architecture & interiors