

PROJECT DELIVERY ACADEMY
Project Advertising and
Construction: Module-5

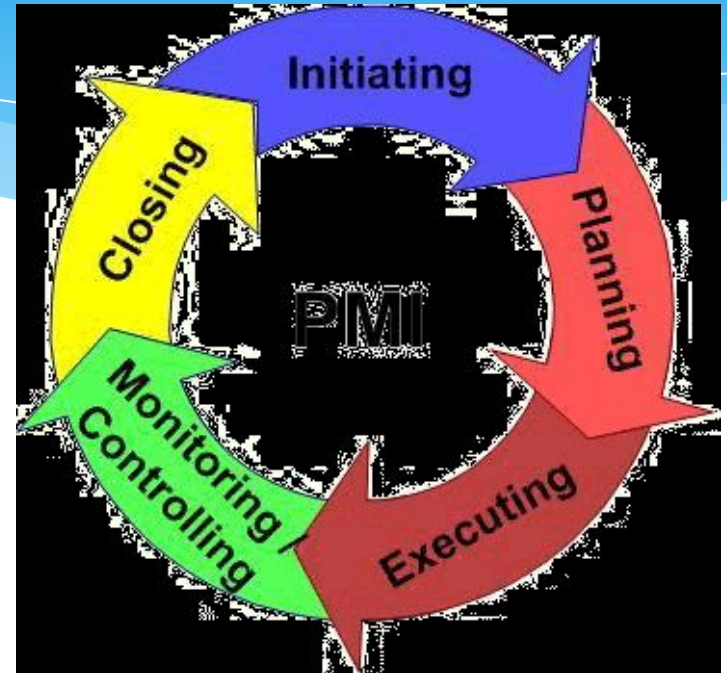
Sarker Rahman, PE

Contracts and Specifications

November 09, 2022

Project Life Cycle:

- ☐ Initiation
- ☐ Planning
- ☐ Design
- ☐ Construction
- ☐ Operations & Maintenance



C&S Responsibility & Project Development?

- ☐ Review Design Submittals (PS&E) :Biddable, Awardable, Constructible
 - ☐ FHWA guidance states that plans and specifications must describe the location and design features and the construction requirements in sufficient detail to allow accurate bids, to facilitate construction and enable the State to control the contract.
- ☐ Cost estimating/ Build engineer's estimate
- ☐ Initiate FHWA authorization package for the project
- ☐ Submit - DBE Goal Request
- ☐ Advertise project

C&S Responsibility & Project Development?

- ☐ Address/answer contractors questions/RFIs and concerns during bidding period
- ☐ Issue addendums if needed
- ☐ Open Bids
- ☐ Review Bid Tabulations
- ☐ Write justifications, if needed
- ☐ Make award/rejection recommendation to STB
- ☐ Work on bid protests with SEO

Ensure a Quality Bid Package:

- ☐ **Biddable:**
 - ☐ Errors, omissions, conflicts
 - ☐ Uncertainty, quantified
- ☐ **Awardable:**
 - ☐ Responsible bidder must submit a responsive bid, there should not be any technical, legal or financial constraints that may hinder the award process
- ☐ **Constructible:**
 - ☐ Clear and feasible construction techniques

Importance of QC/QA During Design and Construction:



Incorporate information from other ADOT Groups through Clearances:

- ❑ Before a project can be authorized and advertised, it must be cleared by Utility & Railroads Group, the Right of Way Group, and the Environmental Planning Group.
- ❑ Requirements from these clearances are incorporated into the project Special Provisions.
- ❑ Use of Conditional Clearances

Common C&S Challenges :

- ❑ Post advertisement activities are ignored
- ❑ Addendum
 - Look towards District/Designer/PM
 - Postpone the project
 - Schedule messed up
- ❑ Late Changes at Stage IV or later
- ❑ Communication gap between C&S and others
- ❑ Comments are not addressed
- ❑ MDR not available at Stage III
- ❑ Conditional Clearances

Specifications:

- ☐ Provide written direction to contractors
 - * constitute most important documents to inform the contractor of the work to be performed
- ☐ Agency established conditions and restrictions concerning work performance
- ☐ Quality and quantity measurement for the work to be performed
- ☐ Compensation for the work
- ☐ Standard, stored, and item specifications

Specifications:

- ☐ Project Specific General Requirements
- ☐ Start of Construction (Fixed/ Quick Start/Typical)
- ☐ Contract Time (WDs /CDs)/End of Construction (Fixed)
- ☐ Applicable Liquidated Damages
- ☐ Hours of Operation (typical shifts, day or night)
- ☐ Holidays and Special Events
- ☐ Full Closure, Lane Closures, Detour
- ☐ Coordination with other ongoing projects in the Area
- ☐ Designated Staging Area/ Material Source Restrictions
- ☐ Access Road

Contractor Prequalification:

ADOT prequalifies contractors for a maximum programmed amount and for the type of work.

See the link below for ADOT's Prequalification Application:

<https://azdot.gov/business/contracts-and-specifications/prequalified-contractors>

Contracts and Specifications:

- ☐ **Advertises construction projects**

 - State funded

 - Federally funded

 - Local Public Agency projects

 - Mixed Funds (Eligibility)

- ☐ **Does not Advertise**

 - Procurement Projects

 - Certification Acceptance Agency projects

Estimate for Construction Costs:

- ❑ Prepare Engineer's Estimate of Construction Costs



Required for all Federal Aid projects.

Essential for:

- ❑ Cost-based estimating
- ❑ Contacting materials sources
- ❑ Estimate for Budget/Program, Fund Obligation and Final Adjustments prior to Bid Open.

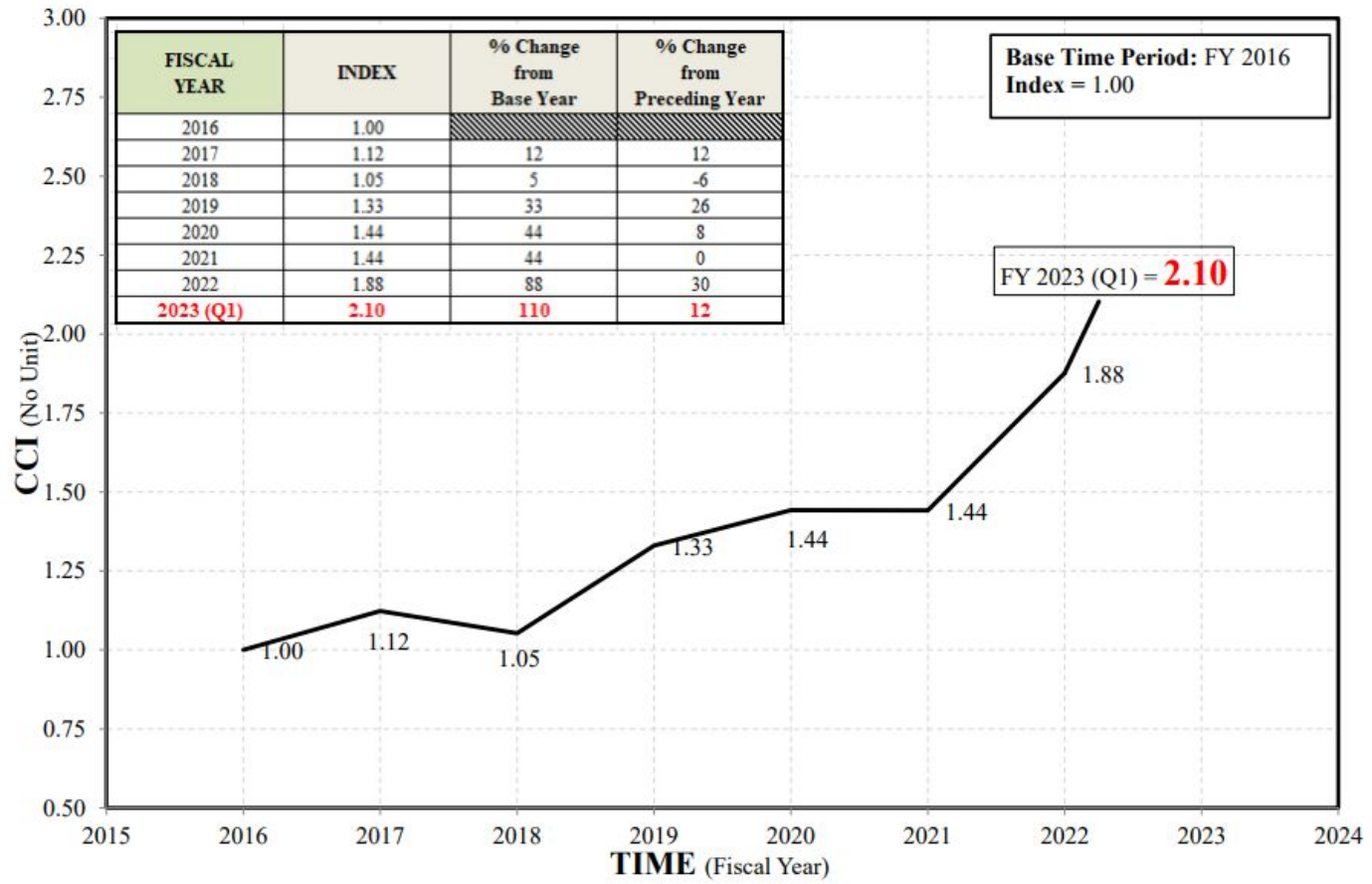
Cost Index:



Arizona Department
of Transportation

CONSTRUCTION COST INDEX

(Posting Date: 10/31/2022)



Justification of Award of Contract or Rejection of Bids:

If the apparent low bid is more than 10% above or 15% below the Engineer's Estimate, C&S prepares a Justification Memo.

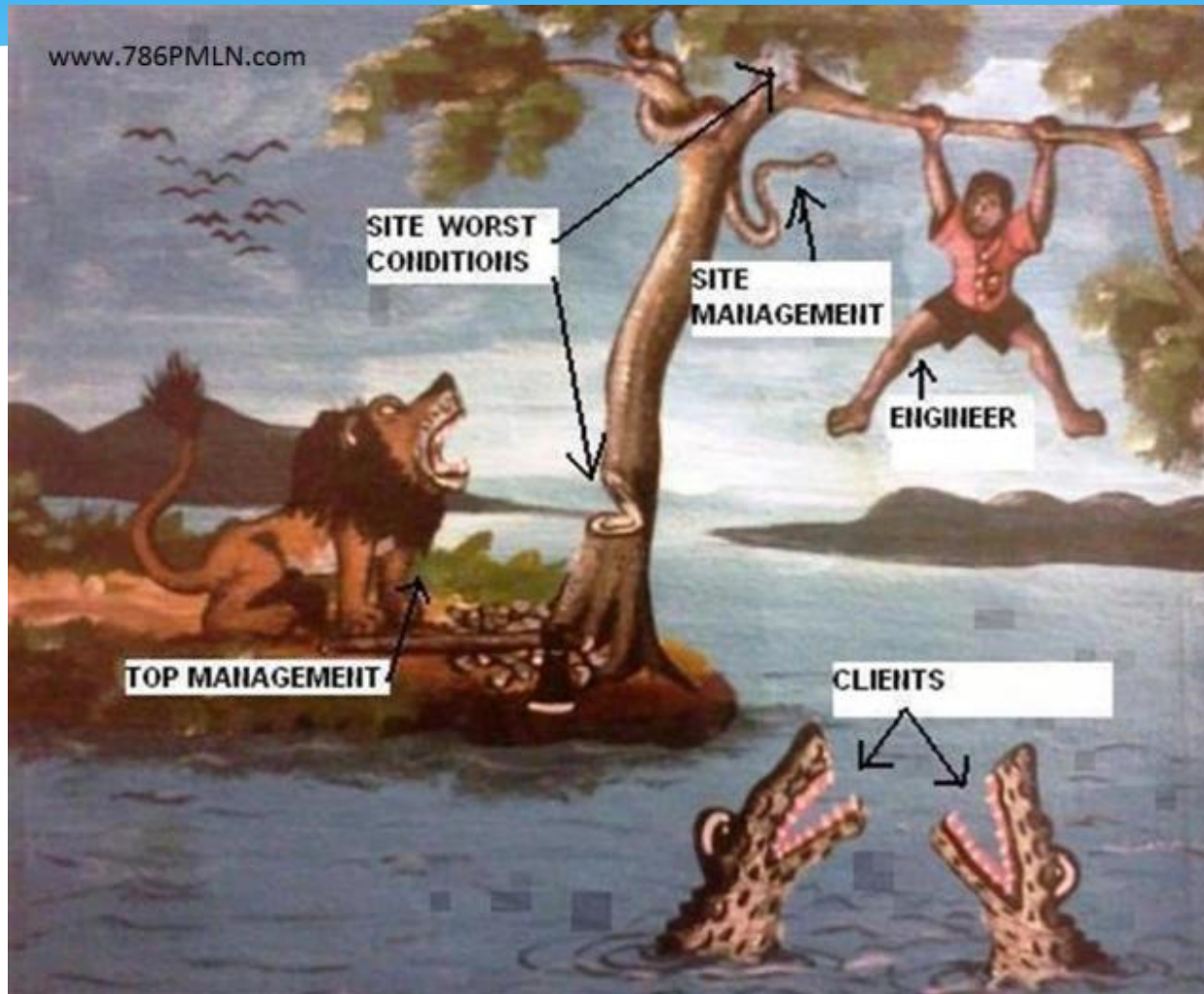
The memo is:

- ☐ Written to the State Engineer
- ☐ Explains the differences between the low bid and Engineer's Estimate
- ☐ Recommends:
 - ▷ Award to the low bidder,
 - ▷ Rejection of low bid and award to second low bidder, or
 - ▷ Rejection of all bids

Execute Construction Contracts:

- ☐ Prepare and execute construction contracts in accordance with the Department's requirements, rules, and regulations, and the special provisions for the project
 - ☐ Ten days for contractor
 - ☐ Ten days for the Department
 - ☐ Challenges – inquiries from Stakeholders
 - ☐ Quick start
- 

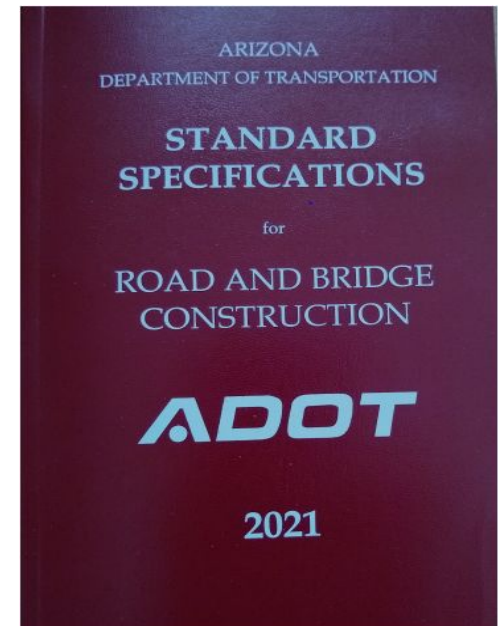
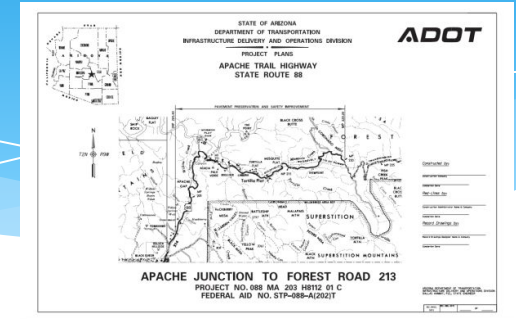
Building A Project:




Hierarchy of Project Documents:

Subsection: 105.06


- ☐ **Supplemental Agreements**
Generated in the field by the Resident Engineer
- ☐ **Special Provisions**
- ☐ **Project Plans**
- ☐ **Standard Drawings**
- ☐ **Standard Specifications - The Blue Book**



Documents Retention in Workfront:

 PROJECT
Ajo Way TO MP 272 ☆ ○○○

Percent Complete
100%

Project Owner
 Wesley Scatena

Planned Completion Date
Oct 21, 2022

← Documents (121)

 Tasks

 Project Details

 Updates

 Documents (121)

 Issues (0)

 Risks

 Milestone

 Approvals

 People

 Hours

 Business Case

 Workload Balancer

 Add new ▾

Folders <<

PROJECT FOLDERS

MASTER PROJECT FOLDER FORM

ADVERTISEMENT ⋮

- 2nd Bid Package
- Bid Package
- Bid Tabulation
- Executed Contract Documents
- Final CADD Files
- Contract Documents
- Federal Authorization
- IGAs JPAs
- Local Project Applications
- Meeting Minutes
- Project Work Plan
- READVERTISEMENT
- STAGE SUBMITTALS
- TECHNICAL TEAMS
- TIPs & Amendments
- TOAST & Design NTP

ADVERTISEMENT (13)

 Final CADD Files (3)

 Executed Contract Documents (0)

 Bid Tabulation (0)

 Bid Package (7)

 2nd Bid Package (8)

 **F021201C_Design Hours_C&S_2nd Bid.xlsx**
Added on Apr 14 at 1:02 pm by Christ Dimitroplos - Comment

 **F021201C Additional Design Hours Estimate_Roadway.xlsx**
Added on Apr 14 at 1:02 pm by Christ Dimitroplos - Comment

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Contracts and Specifications

Current Advertisements

Current Alternative Delivery Projects

As-Read Bid Results

Bid Tabulations

Construction Cost Index

Electronic Bidding

Future Projects

Prequalified Contractors

Bituminous and Fuel Price Adjustment


Estimating Contract Time Guidelines

Specifications & Pay Items List

IMPLEMENTATION OF THE REVISED FORM FHWA 1273:

The FHWA Form 1273 titled "Required Contract Provisions Federal-Aid Construction Contracts" was revised on July 5, 2022. This revised form will be included in all federal-aid construction projects with a bid opening after September 1, 2022.


PREQUALIFICATION

 [Application for Contractor Prequalification](#)

The application can be filled out online, printed and submitted to:

Arizona Department of Transportation
Contracts and Specifications
205 S. 17th Ave
MD 121F
Phoenix, AZ 85007

Related Links

- State Transportation Board Projects: [Contracts Awarded to Contractors](#) 
- [Approved Products List](#)
- [Engineering Consulting Section \(ECS\)](#)
- [Program and Project Management Services](#)

Business

[ADOT Broadband Office](#)

[ADOT Business Coach On Demand](#)

[Business Engagement and Compliance](#)

[Civil Rights/External EEO Contractor Compliance](#)

[Engineering and Construction](#)

[Contracts and Specifications](#)

Current Advertisements

Current Alternative Delivery Projects

As-Read Bid Results

Bid Tabulations

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[Project Management Services](#)

[Highway Maintenance](#)

[Procurement](#)



When Projects Are Not Done & Maintained Properly:



Key C&S Contributions to Project Delivery:

- Work on developing realistic estimate to make sure program amount is adequate.
- Through in depth review ensure quality of the bid documents that resulted in less RFIs, fare bidding and reduces potential changes during construction.
- Ensure Federal requirements are met for all Federally funded projects.
- Initiate construction fund obligation process.
- Advertise/Deliver the projects, which is an item for agency performance measurement.
- Complete the project award process to transition to implementation phase.

Contracts and Specifications Group

602-712-7221



Contracts and Specifications

Questions and Comments:



**As An End User Of All These Infrastructures
Appreciate All The Hard Work And
Do Your Part!**



**Thank you for Your time
and Attention, Stay Safe.**