

# PROJECT DELIVERY ACADEMY

**ADOT**

## Project Advertising and Construction: Module-5

**Sarker Rahman, PE**

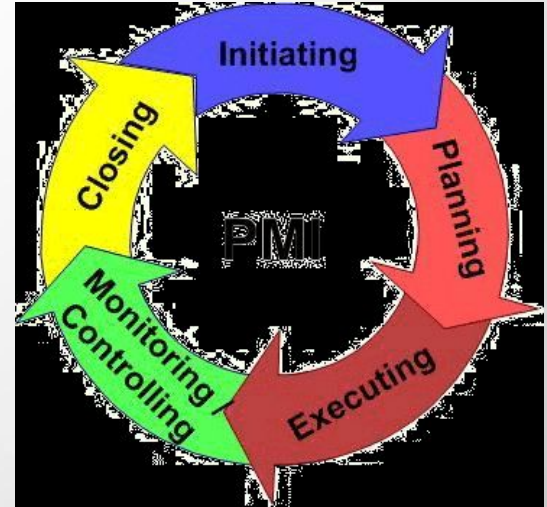
**Contracts and Specifications**

**May 10, 2023**

# Project Life Cycle:

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



# C&S Responsibility & Project Development:

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- 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:

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- 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:

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## □ 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:

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# Common C&S Challenges:

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- ❑ 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:

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- ❑ 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:

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- ❑ **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:

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- ❑ ADOT prequalifies contractors for a maximum programmed amount and for the type of work.
- ❑ See the link below for ADOT's Prequalification Contractors:
- ❑ <https://azdot.gov/business/contracts-and-specifications/prequalified-contractors>

# Contracts and Specifications:

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- **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:

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**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.**

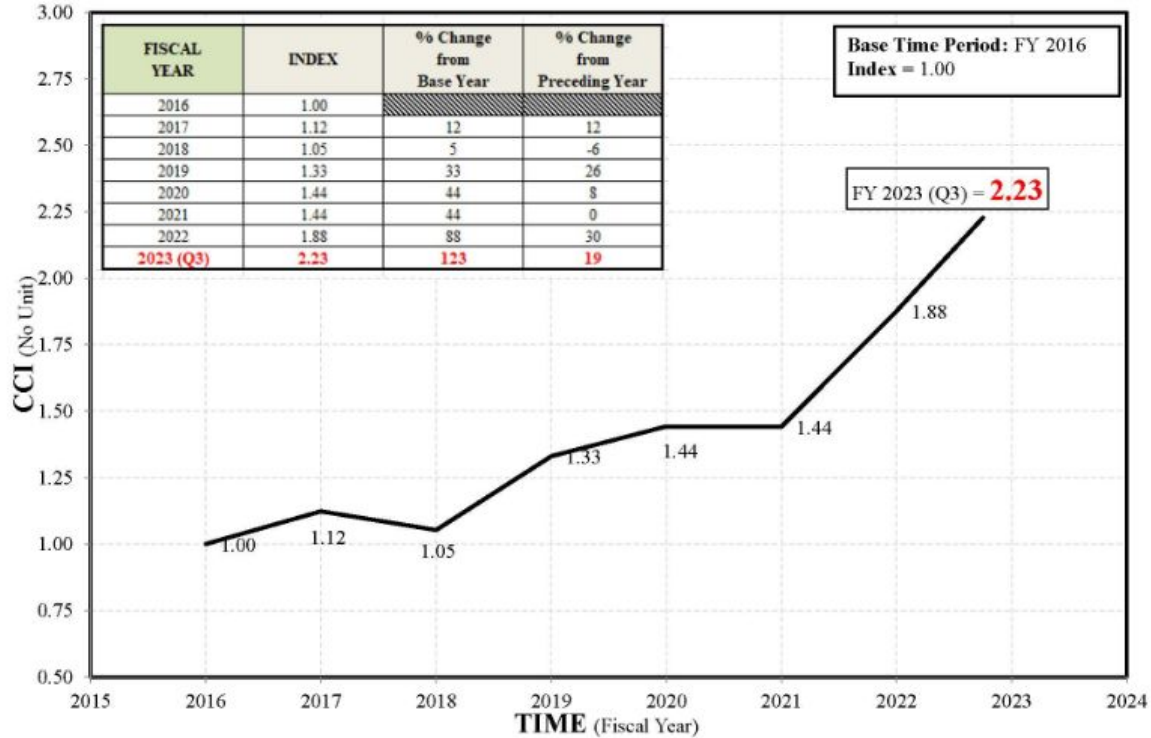
# Cost Index:



**ADOT** | Arizona Department of Transportation

## CONSTRUCTION COST INDEX

(Posting Date: 05/01/2023)



# 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:

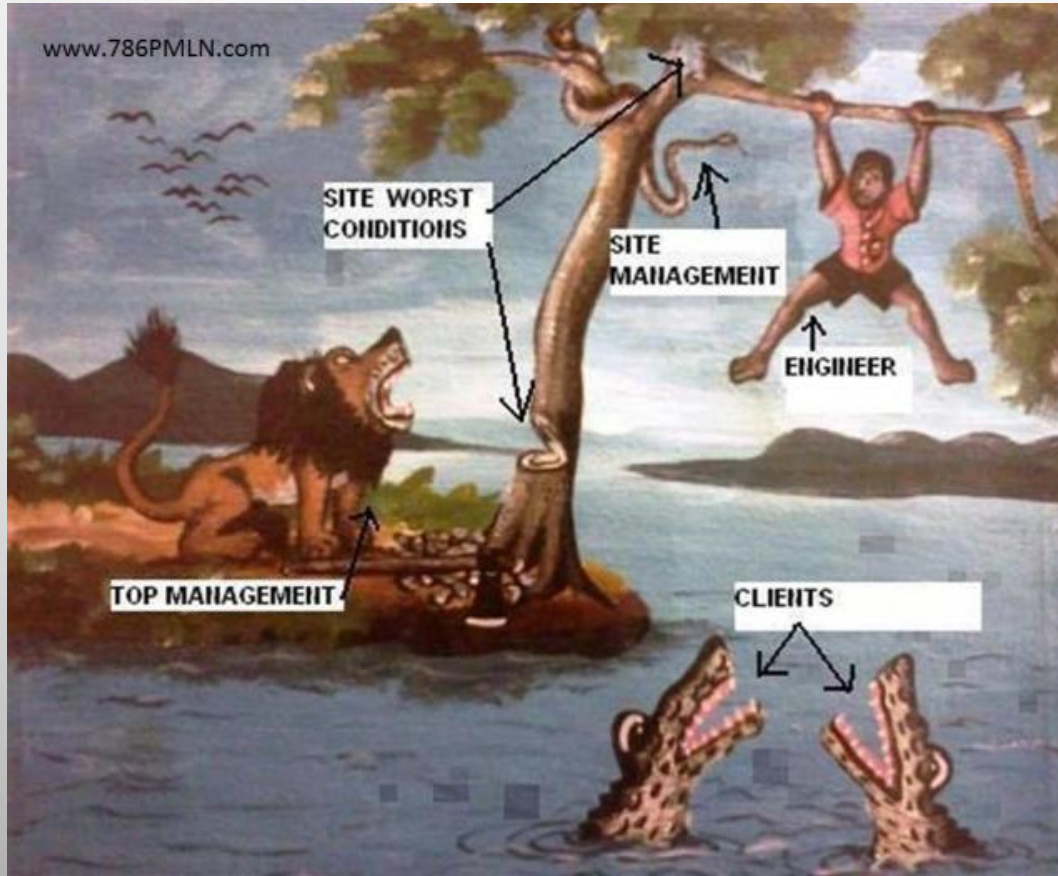
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- Prepare and execute construction contracts in accordance with the Department's requirements, rules, and regulations, and the special provisions for the project
- Ten days for contractor
- Ten days for the Department
- Challenges – inquiries from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



# Building A Project:

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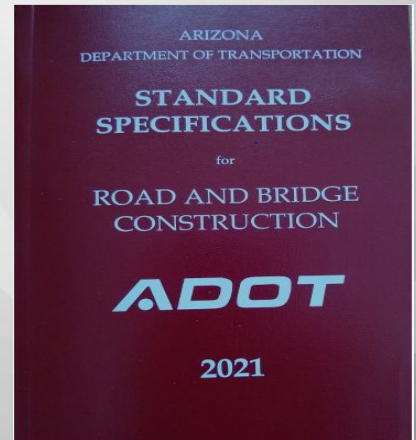
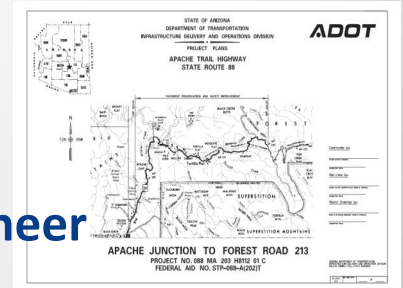


# Hierarchy of Project Documents:

Subsection: 105.06

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- **Supplemental Agreements**
  - ★ Generated in the field by the Resident Engineer
- **Special Provisions**
- **Project Plans**
- **Standard Drawings**
  - ★ Standard Specifications - The Red 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

**ADDITIONAL** Add new ↓ ↓ Share

**Folders** << ADVERTISEMENT (13)

- PROJECT FOLDERS
  - MASTER PROJECT FOLDER FOR
  - 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

| Folder Name                 | Count |
|-----------------------------|-------|
| 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

# Subscribe for updates:

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

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## 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](#)

[Bituminous and Fuel Price Adjustment](#)

[Construction Cost Index](#)

[Current Advertisements](#)

[Current Alternative Delivery Projects](#)

[Electronic Bidding](#)

[Estimating Contract Time Guidelines](#)

[Future Projects](#)

[Prequalified Contractors](#)

[Specifications & Pay Items List](#)

# When Projects Are Not Done & Maintained Properly:

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# 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

Phone:602-712-7221

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# PROJECT DELIVERY ACADEMY

## Project Advertising and Construction:

### Contracts and Specifications

### Questions and Comments:





# As an User of all these Infrastructures Appreciate all the Hard Work...

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