

PROJECT DELIVERY ACADEMY

INITIATING / SCOPING A PROJECT

Rashidul Haque, P.E.

Transportation Engineer Manager

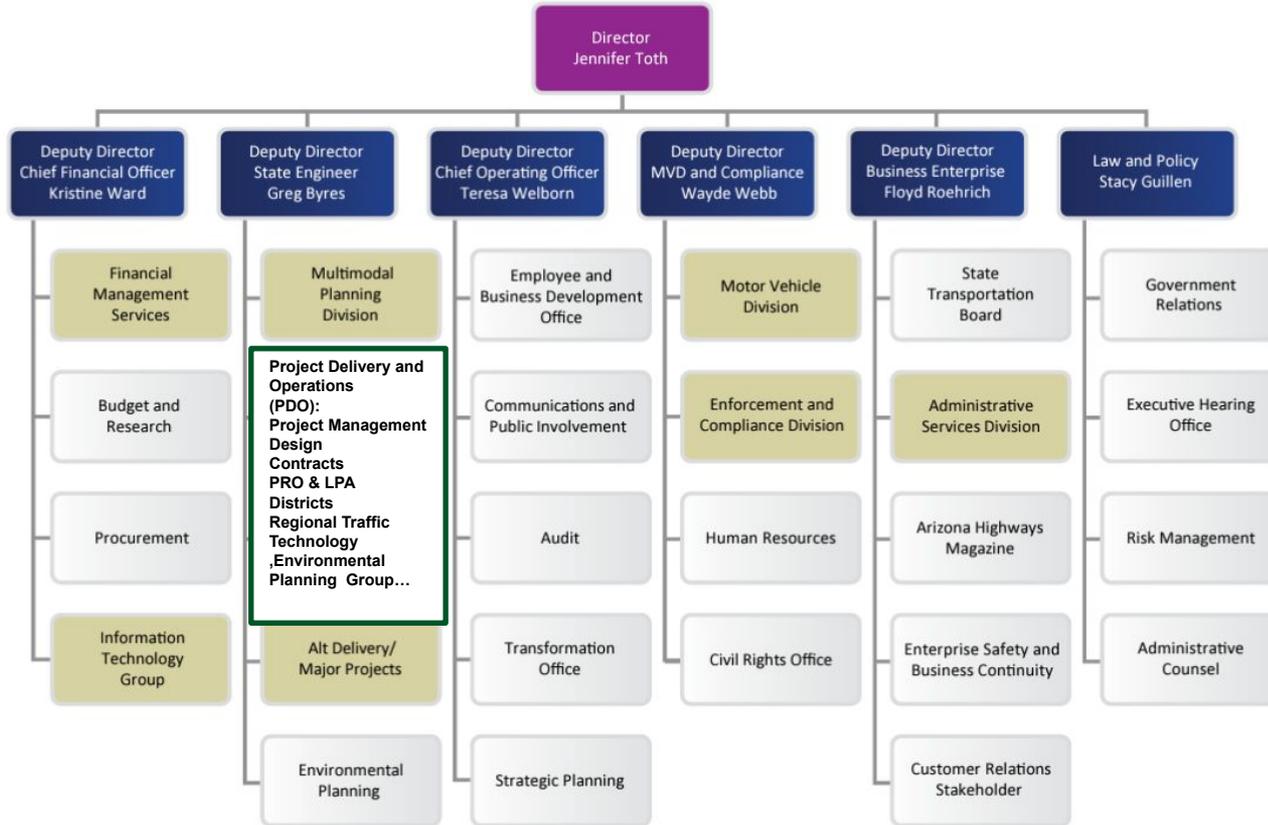
Project Management Group

Project Delivery and Operations

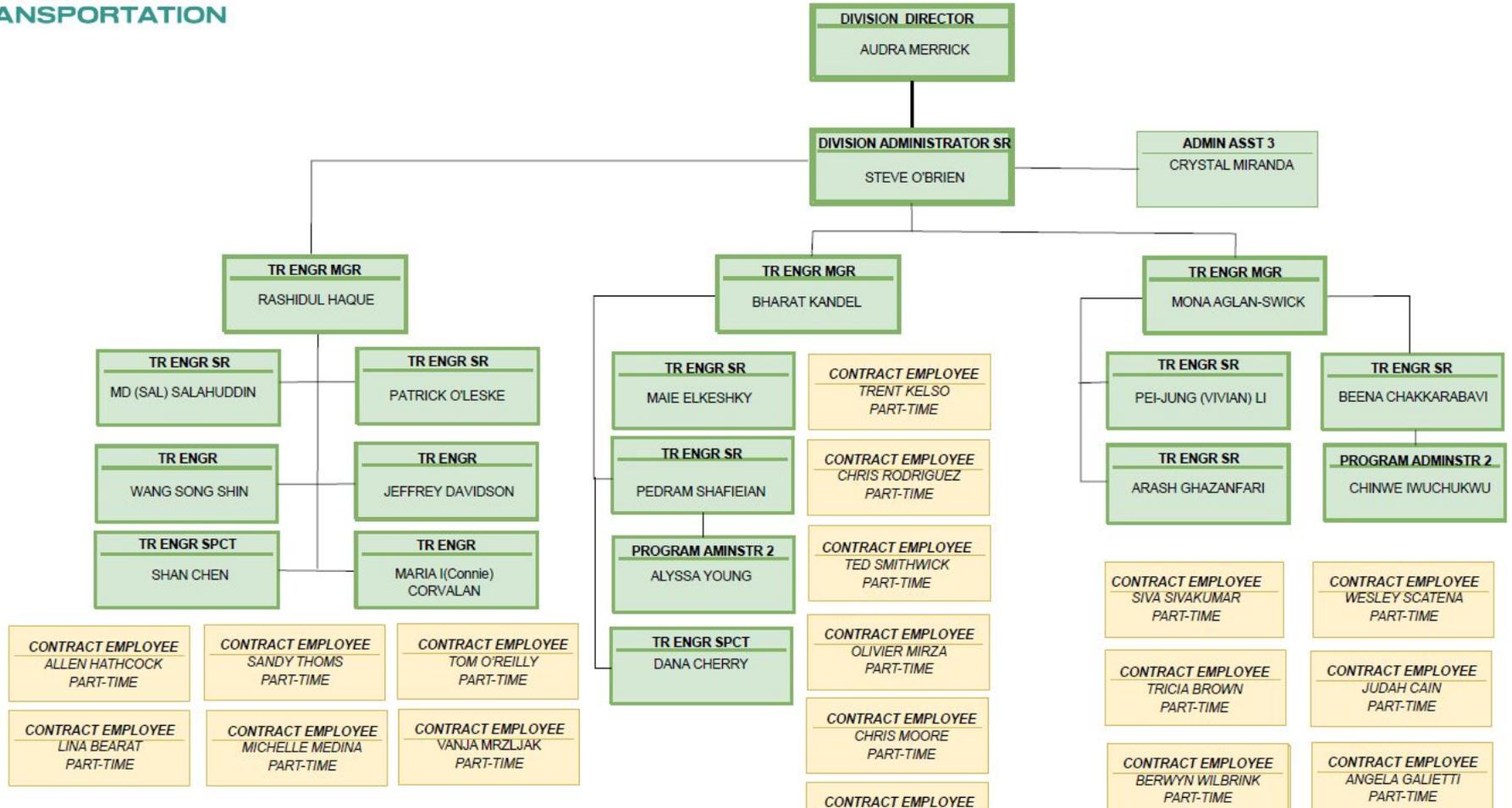
OVERVIEW

- PROJECT MANAGEMENT GROUP (PMG) OVERVIEW
 - WHO WE ARE & WHAT WE DO
- PROJECT DEVELOPMENT
 - PLANNING AND PROGRAMMING OVERVIEW
 - DESIGN PROCESS OVERVIEW
 - SCOPING TOOLS & RESOURCES

ADOT ORGANIZATION



PROJECT MANAGEMENT GROUP



PROJECT MANAGEMENT GROUP OVERVIEW

- RESPONSIBLE FOR LEADING THE DEVELOPMENT OF ALL DESIGN BID BUILD PROJECTS TO BE ADVERTISED FOR CONSTRUCTION BY ADOT CONTRACTS AND SPECIFICATIONS (C&S)*
- PERFORMANCE GOAL TO ADVERTISE A WELL DISTRIBUTED NUMBER OF PROJECTS EACH QUARTER (20-30-30-20)
- 123 STATE & LOCAL PROJECTS TOTALLING \$ 2.42B IN FY25



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PROJECT DEVELOPMENT

WHERE DO STATE PROJECTS COME FROM?

ADOT's Transportation Improvement Plan (TIP):
(STIP, 5-year plan, the Program)



Construction of bridge girders for the Gila River on I-10 in Pinal County

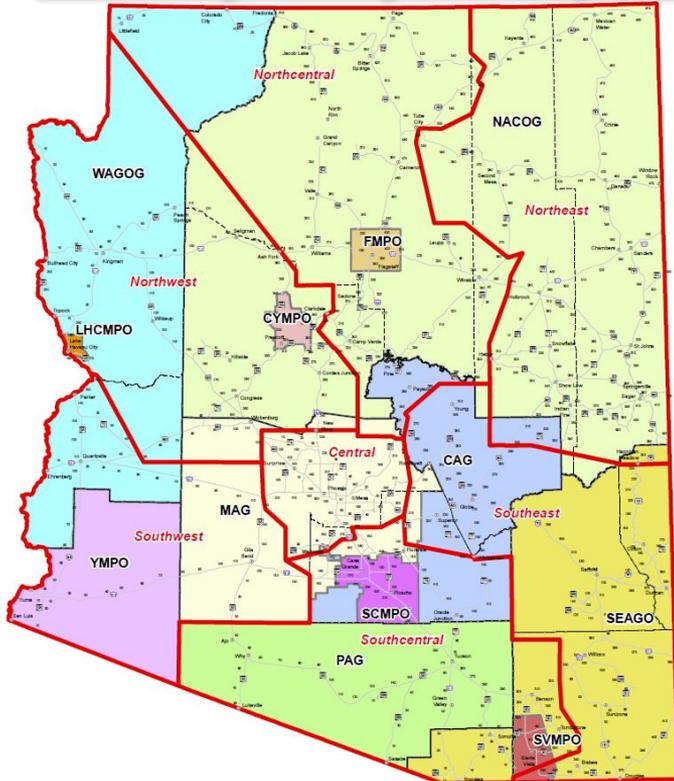
2026-2030
Arizona Department of Transportation
Five Year Facilities Construction Program

Greater Arizona Highway Projects
Maricopa County Regional Transportation Plan Freeway Program
Pima County Regional Transportation Authority Highway Program
Airport Capital Improvement Program

ARIZONA
DEPARTMENT OF
TRANSPORTATION

PROJECT DEVELOPMENT

Planning & Programming



WHERE DO LOCAL PROJECTS COME FROM?

COGs & MPOs TIPs TMA

(Council of Governments)

(Municipal Planning Organization)

(Transportation Improvement
Plan)

(Transportation Management Areas)

PROJECT DEVELOPMENT

WHAT DO WE KNOW ABOUT THE PROJECT?

What resources are available? *Time, Funding, People*

Who local / District contacts are there?

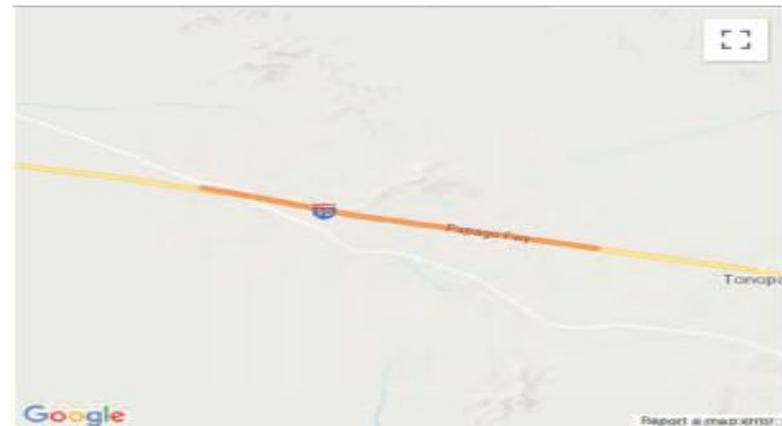
What is the purpose & need for the project?

Knowns vs Unknowns (*Manage Risks*)

PROJECT DEVELOPMENT

ADOT ID	101084	MPO/TIP	MAG 21-00	Local ID		Total Cost	\$21,400,000
Lead Agency	ADOT	Contact	Jennifer Acuna 602-712-8336	ADOT Number	F034501D, 01C	County	Maricopa
Project Type	Road - Rehabilitation	Air Quality	Exempt	TCM		Construction	2023 start
Project Name	W of Salome Rd - W of Tonopah						
Route	I 10						
Project Limits	I 10 from Salome Rd to Tonopah Rd milepost 90 to 100 (10 mile)						
Description	Pavement Rehabilitation						

Phase	Fund Source	Prior	FY2021	FY2022	FY2023	FY2024	FY2025	Future	Total
DESIGN	NHPP	-	\$377,360	-	-	-	-	-	\$377,360
DESIGN	State Match	-	\$22,640	-	-	-	-	-	\$22,640
	<i>Total DESIGN</i>	-	\$400,000	-	-	-	-	-	\$400,000
CON	NHPP	-	-	-	\$19,811,400	-	-	-	\$19,811,400
CON	State Match	-	-	-	\$1,188,600	-	-	-	\$1,188,600
	<i>Total Construction</i>	-	-	-	\$21,000,000	-	-	-	\$21,000,000
	Total Programmed	-	\$400,000	-	\$21,000,000	-	-	-	\$21,400,000



Version History

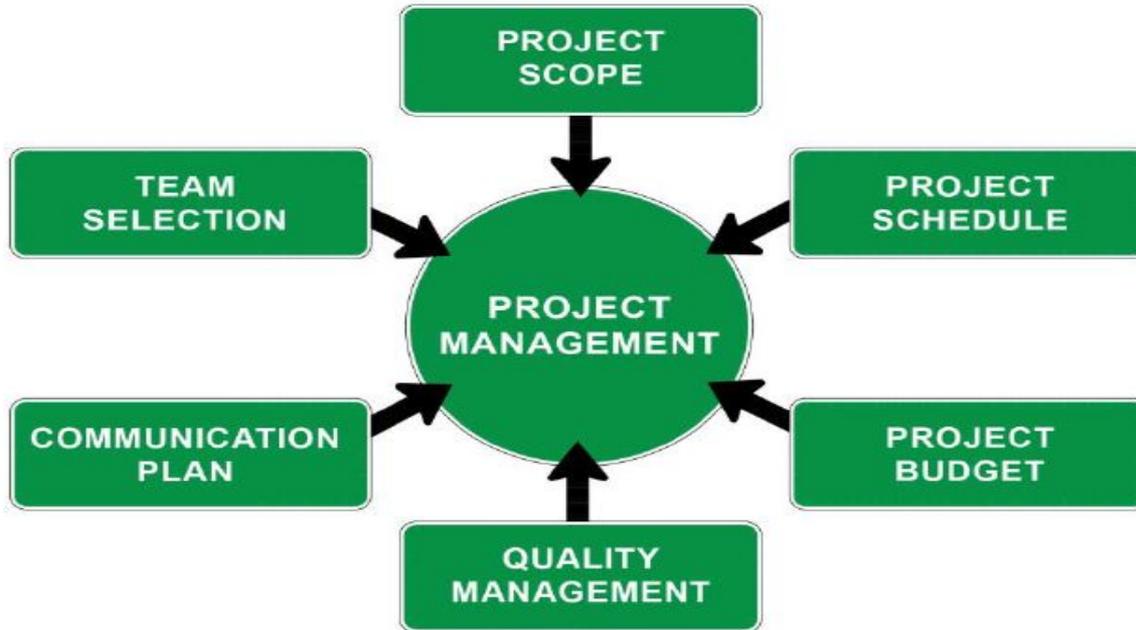
TIP Document	MPO Approval	State Approval	FHWA Approval	FTA Approval
21-00 Adoption 2021-2025	Pending	Pending	Pending	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - New Project

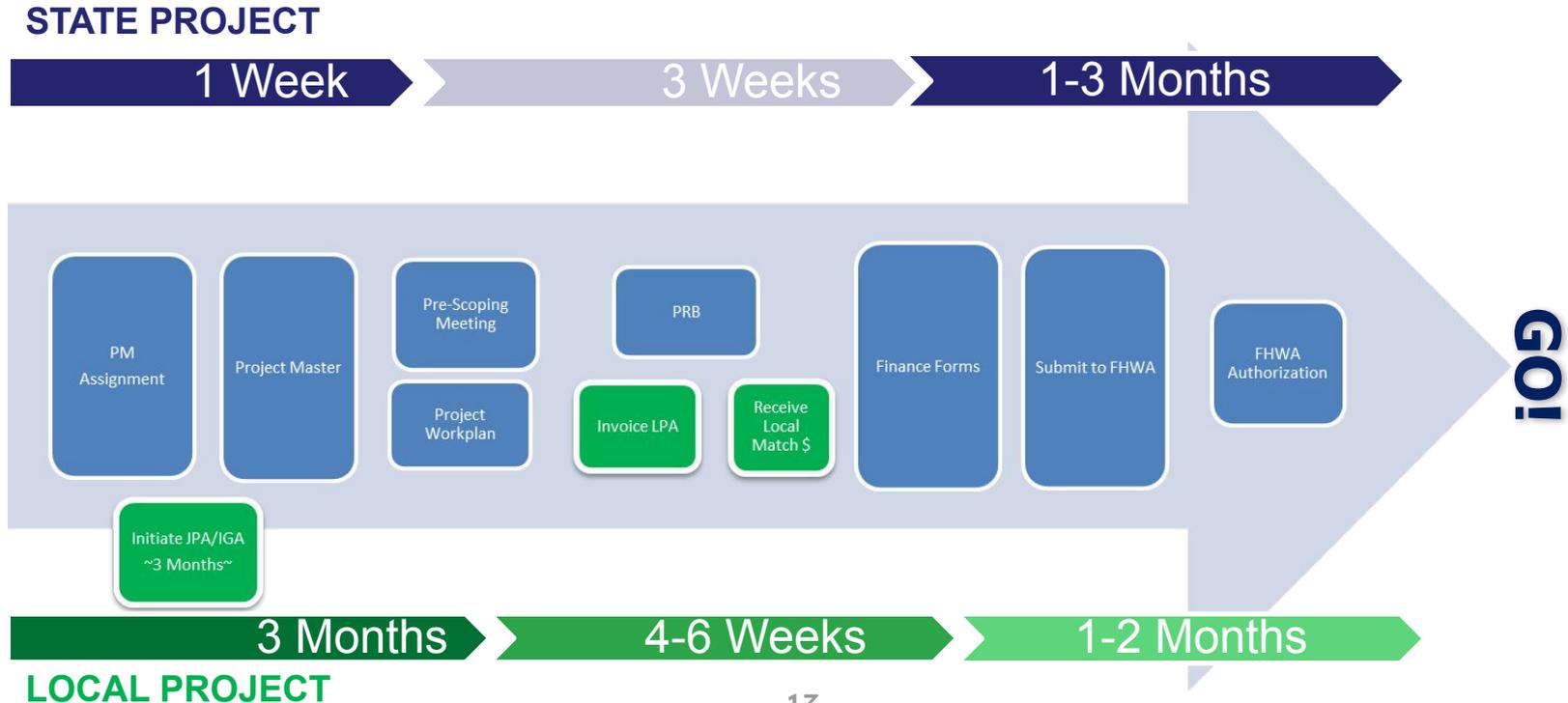
PROJECT DEVELOPMENT

Project Management



PROJECT DEVELOPMENT

Project Set Up – Funding Authorization



PROJECT DEVELOPMENT

Scope, Schedule, & Budget

- Team
- Communication Protocol
- Design Criteria
- Project Schedule/Budget
- Project Risks/Risk Register
- Project Quality Plan

Work Plan Short Form			
1. Enter the following information:			
a. Project Manager	Jennifer Acuna	j. Stakeholders	Flagstaff
b. Project Name	WINONA TI UNDERPASS STR # 1084	k. Project Number	F0108
c. Type of Work	Bridge Rehabilitation	l. TIP ID	8808
d. Route	I-40	m. JPA No.	N/A
e. Milepost Limits	210-212	n. Funding Amount - Design (\$)	578,000
f. Federal ID	040-D(237)T	o. Funding Amount - Construction (\$)	4,700,000
g. District	Northcentral	p. Advertisement (FY/Qtr)	FY20/2nd
h. Project Type (State, LPA)	State	q. Design By:	ADOT In-House
i. Local Agency(s)			
INSTRUCTIONS			
1. Enter the information above. It will autofill throughout the Workbook.			
2. Not all conditions apply to every project. If, in going through the checklist of questions, a condition does not apply, simply indicate "N/A".			
3. Use forms throughout project life cycle unless indicated			
4. Templates and Links to Project Documents Below:			
Link to Document or Reference	Item	Description	Version Date
TIP	TIP	Link to TIP, STIP	
Project Master	Project Master	New Project Number and Subphase Setup, View Finance Auth. Status, Search for Budget Item Numbers, Etc.	
Project Folder	Project Folder	New Project Folder Set-up	6/29/17
Project Initiation	Project Initiation Form	Project Contacts	9/21/18
JPA Agreements	JPA Initiation and Amendments	Initiation of JPA Agreement and Amendment Request Form	
Design Hour Estimate	Design Estimate	Design Estimate Worksheet	8/23/18
Invoice Request	Invoice Request	Request to Accounts Receivable for Local Match Invoices and other Local expenses	2/23/16
Contract Mod Checklist	Contract Modification Checklist	Contract Modification Checklist	6/15/17
Project Determination	Project Determination Form	Form for Scoping Document Concurrence	6/15/18
FARA & MPARA	FARA and MPARA	Federal Authorizations and Modifications	5/1/15
Stage Deliverables Checklists	Stage Deliverable Checklists	Stage Deliverable Checklists	6/8/16
Meeting Templates	Meeting Templates	Meeting Templates	
Comment Form	Comment Resolution Form	ADOT and Compliance Comment Form	10/5/18
iCAP Calc	iCAP Calculator	Calculates iCAP and Local Match Amounts	7/18/18
Project Status Form	Project Status Form	Monthly Status Updates	10/11/16
AIDW	AIDW	Project Submittal and Document Repository	
Systems Engineering Checklist	Systems Engineering Checklist	Filled out and Signed by ADOT ITS for all ITS Projects	1/8/18
Recap	Recapitulation Worksheet	Recapitulation Worksheet	3/5/18
CAG TIP	Central Arizona Governments TIP		
FMPO TIP	Flagstaff Metropolitan Planning Organization TIP		
LHMPO TIP	Lake Havasu Metropolitan Planning Organization TIP		
MAG TIP	Maricopa Association of Governments TIP		
NACOG TIP	Northern Arizona Council of Governments TIP		
PAG TIP	Pima Association of Governments TIP		
SCMPO TIP	Sun Corridor Metropolitan Planning Organization TIP		
SEAGO TIP	Southeastern Arizona Governments Organization TIP		
YMPO TIP	Yuma Metropolitan Planning Organization		

PROJECT DEVELOPMENT

Designer Assignment

WHO WILL DESIGN THE PROJECT?

ADOT (30% OF PROJECTS – NO LOCAL PROJECTS)

ADOT PM is the facilitator between the technical groups

ADOT technical teams perform design services, ADOT team members are assigned from the following disciplines:

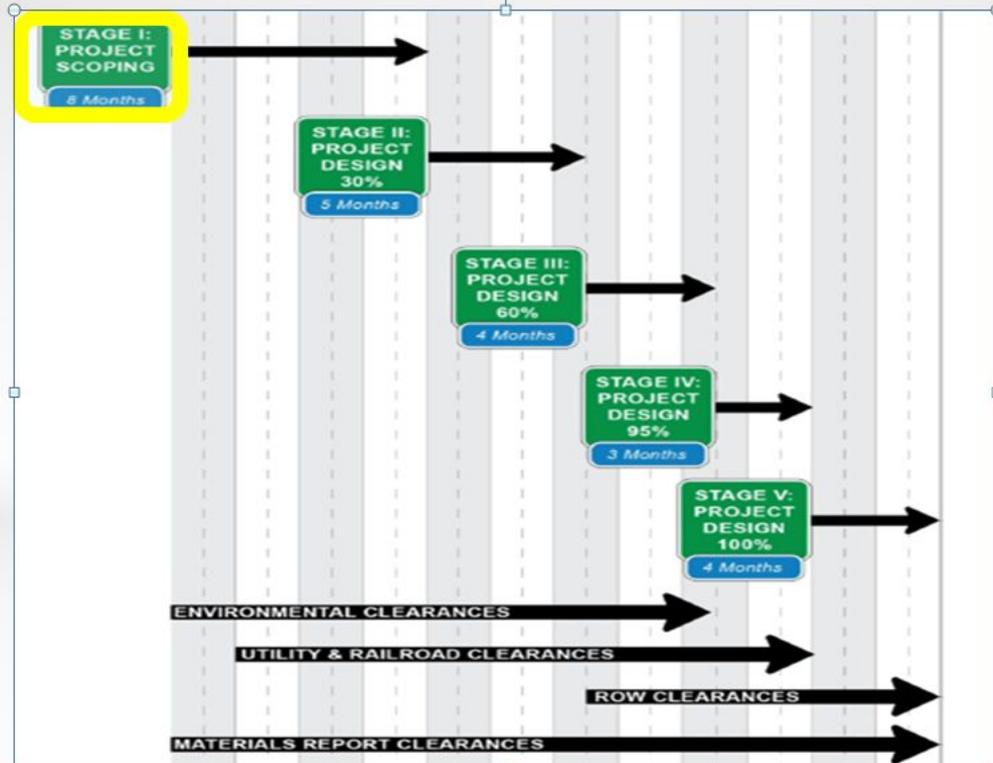
Pre-Design	Roadside	Traffic	Geotech	Right of Way
Roadway	Drainage	Contracts & Specs	HSIP	Environmental
Pavement	Survey	Bridge	TSMO	Utility/RR

Consultant (70% OF ALL PROJECTS)

Prime Consultant performs all design disciplines and clearance documentation- internal staff or Subconsultants

PROJECT DEVELOPMENT

Stage I & Project Scoping



Scoping

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
PROJECT MANAGEMENT GROUP

DICTIONARY
OF
STANDARDIZED WORK TASKS

Fiscal Year 2023

Scoping

ARIZONA DEPARTMENT OF TRANSPORTATION



**GUIDELINES FOR SCOPING
PAVEMENT PRESERVATION PROJECTS**

November 2015

ROADWAY ENGINEERING GROUP
ROADWAY PREDESIGN SECTION

Scoping

SUPPLIER	MILESTONE SUBMITTAL ITEMS	DCR-PA/ 15% STG I	30% STG II	60% STG III	95% STG IV	100% STG V
Survey, F&M	DTM Mapping	F				
Survey, ROW	Survey Sectional Control, RW Survey, and Results of Survey	P	F	S		
ROW	ROW Plans	I	P	F		S
ENV	Env. Document- E/FEIS	P	F	F		
ENV	Env. Document- CE	P	P	F		
ENV	Noise Impact Analysis	F		P	F	
ENV	Environmental Permits	F				
Designers, ENV, USRR, ROW	Project footprint File (RMZ)	I	P	F		
Communications	Public Involvement Plan	F				
ENV, Geotech	Geotech Drilling Env. Clearance	F				
Geotech	Field Investigation	P	P	F		
Geotech Design	Bridge Foundation Report	I	P	F	S	
Geotech Design	Geotechnical Report	I	P	F	S	
Roadway	Pavement Design Summary	I	P	F	S	
Roadway	Materials Design Report	I	P	F	S	
USRR	Utility Base Map/Designs (SUE Ph I)	P	F	F	S	
USRR	Utility Locating / Pot-holing (SUE Ph II)	I	P	F	S	
Util. Cos, USRR	Conflict Determinations, Prior Rights	I	P	F	S	
USRR	Utility Report	P	P	F	S	
Util. Cos, Rdwy., USRR	Utility Relocation Plans, Details		P	P	F	S
Bridge	Initial Bridge Study (w/ geotech clearance footprint)	F				
Bridge	Structure Selection Report		P	F	S	
Bridge/Drainage	Hydraulics Report -NBI Structures		P	F	S	
Bridge	Wall Report		P	F	S	
Drainage	Drainage Report -Roadway		P	F	S	
Traffic	Traffic Analysis Report	P	F	S	S	
Traffic	Transportation Mgmt. Plans (TMP) Memo		I	P	F	
Roadway	Right-of-Way and TCE Requirements for Project-Project Footprint	P	F			
Roadway	Face Sheet	I	P	F	F	F
Roadway	List of Standard Drawings		P	P	F	F
Roadway	Design Sheet & Index		P	P	F	S
Roadway	Typical Roadway Sections	I	P	F	F	S
Roadway	Geometric Control Sheets		P	F	F	S
Rdwy., Designers	Summary Sheets			P	F	S
Rdwy., Designers	Special Detail Drawings			P	F	S
Roadway	Turnout & Driveway Details	I	P	P	F	S
Roadway, USRR	Existing Conditions & Removal		P	F	F	S
Roadway, Traffic	Detour Plan and Profile Sheets		P	P	F	S
Roadway, Traffic	Parking Area Plans & Details		P	F	F	S
Roadway	Staking and Joint Layout Plans			P	F	S

SUPPLIER	MILESTONE SUBMITTAL ITEMS	DCR-PA/ 15% STG I	30% STG II	60% STG III	95% STG IV	100% STG V
Roadway	Fencing Plans		I	P	F	S
Bridge	Major Structural Plans, Details			P	F	S
Bridge	Retaining and Snow Wall Plans	I	P	P	F	S
Bridge	ABC Evaluation	I	F			
Drainage, Rdwy.	Roadway Drainage Plans & Details		P	P	F	S
Roadway	Roadway Plan & Profile Sheets	I	P	P	F	S
Roadway	Intersection Plans & Details		P	P	F	S
Roadway	Interchange Plans & Details		P	P	F	S
Roadway	Roadway Cross Sections	I	P	P	P	F
Traffic	Detour Route Established	P	F			
Roadway/Traffic	Detour Plan and Profile Sheets			P	F	S
Traffic	Traffic Signal Plans, Details			P	F	S
Traffic	Traffic Control Plans, Details			P	F	S
Traffic	Signing & Pavement Marking Plans & City			P	F	S
Traffic	Lighting Plans & Details			P	F	S
Traffic, Rdwy, District	Sequence of Construction	I	P	P	F	S
Designers, C&S, and District	Construction Schedule and Durations		I	P	F	F
District, Communications	CE Fix Cost Estimate				F	
Roadside	Aesthetics, Landscape Plans & Details	I	P	P	F	S
Roadside	Stormwater Pollution Prevention Control Plan - Erosion & Sediment Control			P	F	S
Roadside, Rdwy	Top Soil Paving Sheets			P	F	S
Environmental	EPIC			P	F	F
C&S	Bidding Schedule			P	P	F
C&S	Recap Sheet				P	F
Designers, C&S	Estimate	I	P	P	F	S
Designers	Earthwork Summary	I	P	P	F	S
Designers, C&S	Special Provisions, including stored specs, bid documents		I	P	F	S
Designers	Post Design Estimate				F	
PMG, Construction	Average User Delay Costs				F	
PMG, JPA, FMS	Maintenance and Financial Agreements -JPAs, IGAs, etc.	I	P	F		
Railroad, USRR	Railroad Service Agreement			P	F	
Util. Cos, USRR	Utility Relocation Agreement			P	F	
Util. Cos, USRR	Utility Service Agreement			P	F	
ENV, RW and USRR	Clearances - Environmental - Right of Way Utilities & Railroad		P	F	F	
Civil Rights*	ESE Participation Goals/Trainees					F
C & S*	FHWA Submittals - PS&E, construction					F

SUPPLIER	MILESTONE SUBMITTAL ITEMS	DCR-PA/ 15% STG I	30% STG II	60% STG III	95% STG IV	100% STG V
Designers	duration & clearances CADD Files (graphic, ascii, dtm, & etc.)					F

* Applies to federally funded projects only

LEGEND:

I = denotes initial concepts

P = denotes preliminary, unchecked, excluding minor details

F = denotes final, checked, all details and quantities

S = denotes sealed in accordance with technical registration requirements

PROJECT DEVELOPMENT

Stage I & Project Scoping

WHAT IS DONE DURING STAGE I/SCOPING?

- Kick-Off Meeting and Site Visit
- Gather project information including:
 - Survey & mapping
 - Stakeholder interests/concerns
 - Record drawings, etc.
- Prepare and Finalize scoping document

- Current site characteristics
- Potential project footprint
- Major project components
- Potential design alternatives

- Environmental resource clearance requirements
- ROW clearance needs
- Utility and railroad coordination requirements
- Landownership
- Geotechnical investigation needs
- Hydrologic conditions
- Cost estimates

PROJECT DEVELOPMENT

Stage I & Project Scoping

WHAT IS A SCOPING DOCUMENT?

- Feasibility Studies
- Design Concept Reports
- Project Assessments
- Scoping Letters

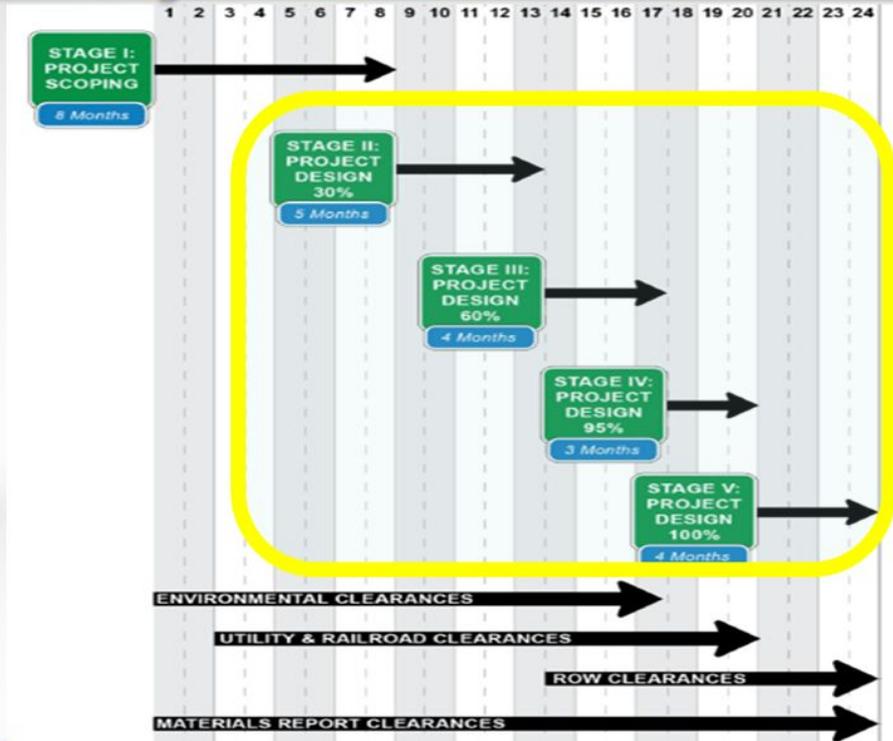
Concurring Signatures from:

Pre-Design	Environmental
Project Management	Subprogram Manager
Deputy State Engineer	District Engineer

PROJECT DETERMINATION FORM							
Project Number 260 Na. 302 F0058 01C 260-B(222)T		County and ADOT District Navajo County Northeast District		Project Name and Highway Mainline Rd – Overgaard SR 260		Final Project Assessment Date June 4, 2018	
Project Description Pavement Preservation				Construction Fiscal Year			
Existing Program		Program Year		Programmed Budget		Operating Partnership Category	
Yes No		2019		Not programmed PA Construction Cost Estimate \$4,259,000		S F T D Z N/A	
Yes X						S F T D Z N/A X	
Public Hearing: In the Highway Development Process, at least one public hearing or the opportunity for a hearing will be offered for any project that:							
Requires a significant amount of new right-of-way; Substantially changes the layout or function of connecting roadway or the facility being improved; Has a significant adverse impact on abutting real property;				Otherwise has a significant social, economic, environmental or other effect; Is controversial on environmental grounds; Or has significant floodplain encroachment			
				X None of the above conditions apply			
Recommendations:							
YES: No:		Public Forum		Class I		Environmental Category	
X		X Offer a combined Location / Design Hearing		X		Class II	
		X Offer Separate Location/Design Hearing				Class III	
		X Hold a Design Public Hearing					
Concur:		Discussed by: <i>Reed Henry</i> 6/6/2018 Reed Henry Manager Roadway Pre-design Section 605 E		Discussed by: <i>Paul O'Brien</i> 6/6/2018 Paul O'Brien Manager Environmental Planning Group EM02			
		Discussed by: <i>Kirstin Tvedten</i> 6/6/2018 Kirstin Tvedten Project Manager Statewide Project Management Group 614E		Discussed by: <i>Kevin Robertson</i> 6/6/2018 Kevin Robertson Manager Pavement Management Section 068R			
Approve:		Discussed by: <i>Michael DenBleyker</i> 6/6/2018 Michael DenBleyker Deputy State Roadway Engineer Date Roadway Engineering Group 605 E		Discussed by: <i>Lynn Johnson</i> 6/6/2018 Lynn Johnson District Engineer Northeast District			

PROJECT DEVELOPMENT

Stage II – Stage V



QUESTIONS?

COMMENTS?

•  PMG@azdot.gov

Thank You!