

Environmental in ADOT Project Development



Final Design and NEPA
Approval –

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- ADOT Environmental
Planning



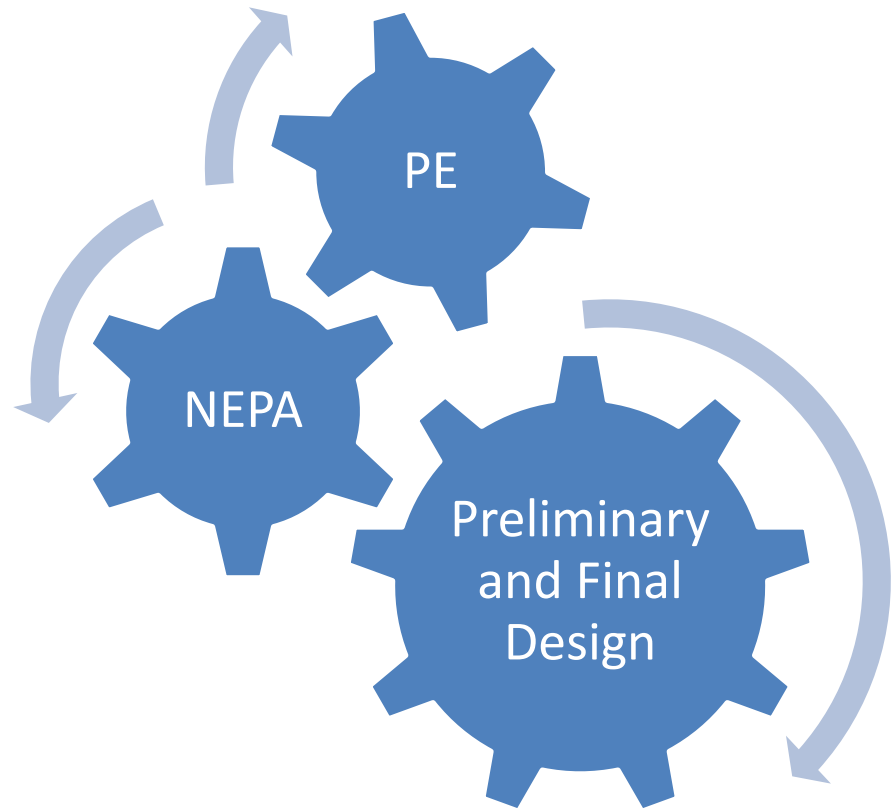
January 2021

Environmental in ADOT Project Development

Final Design and NEPA Approval

➤ Objective

- Understand 'preliminary design, final design and NEPA approval' in relation to federal funding (PE) and ADOT plan submittal stages



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FHWA Project Tracker for 12-08-20 Meeting (1) - Excel

	RT	TRACS	LOCATION	ENV. CLR	ROW CLR	UTIL/RR CLR	STAGE III (60%)	STAGE IV (95%)	FINAL (100%)	SUBMITTED TO FMS	SUBMITTED TO FHWA	AUTHORIZED BY FHWA	ADV
1													
2	Quarter Unknown and Q1 Proj												
1	10		GILA RIVER INDIAN COMMUNITY ACCESS IMPROVEMENTS										
2	40	F0153	LEUPP TI UP	02-27-2020 A	03-03-2020 A	08-17-2020 A	08-23-2019 A	07-24-2020 A	10-16-2020 A	11-23-2020 A	11-23-2020 A		
3	179	F0167	I-17 - RED ROCK VISTA	07-30-2019 A	02-20-2019 A	05-29-2019 A	07-15-2019 A	07-15-2019 A	08-15-2020				
4	17	F0312	VAN BUREN ST - FLAGSTAFF	08-07-2020 A	08-10-2020 A	8/28/2020	06-22-2020	07-24-2020	08-07-2020				
5	Q2 Projects (FY21)												
5	15	H8760	VIRGIN RIVER BRIDGE NO 1	05-13-2017	12-05-2020	09-21-2020 A	02-11-2020 A	06-05-2020 A	12-05-2020				1
6	89	HX247	SR 89, AT ROAD 1 NORTH	02-07-2019 A	07-02-2020 A	07-30-2020 A	03-23-2018 A	12-10-2018 A	07-16-2020 A	11-05-2020 A	11-23-2020 A	11-30-2020 P	1

The ENV Clearance date should precede the Final Design date

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Federal Authorization for Preliminary Engineering (PE)

GENERAL DESCRIPTION OF WORK					
NEW SIDEWALK AND BIKE LANES					
YOU ARE AUTHORIZED TO PROCEED WITH THE WORK CHECKED BELOW:					
<input checked="" type="checkbox"/> PHASE I: PRELIMINARY ENGINEERING - SCOPING, LOCATION STUDIES, ENVIRONMENTAL STUDIES AND PRELIMINARY DESIGN		<input type="checkbox"/> CONSTRUCTION - ADVERTISE FOR RECEIPT OF BIDS			
<input checked="" type="checkbox"/> PHASE II: PRELIMINARY ENGINEERING - FINAL DESIGN/PREPARATION OF CONTRACT PLANS		<input type="checkbox"/> CONSTRUCTION - PROCEED ON AN AGREED PRICE AND/OR FORCE ACCOUNT BASIS			
<input type="checkbox"/> ACQUISITION OF RIGHT-OF-WAY		<input type="checkbox"/> Other:			
FUNDING	TOTAL ESTIMATED PROJECT COST(\$)	FEDERAL PARTICIPATION AMOUNT(\$)	FEDERAL FUNDS(\$)	APPN CODE	RATIO(%)
PREVIOUS AUTHORIZATIONS:					
THIS AUTHORIZATION	\$79,533	\$79,533.00	\$75,000.00	L220	94.30% ✓
PROJECT TOTALS	\$79,533 ✓	\$79,533.00 ✓	\$75,000.00 ✓		
OTHER (SPECIFY)					
<p>This agreement is subject to the following award terms: http://edocket.access.gpo.gov/2010/pdf/2010-22705.pdf and http://edocket.access.gpo.gov/2010/pdf/2010-22706.pdf</p> <p>No preliminary design activities shall be undertaken that (1) have an adverse environmental impact, or (2) limit the choice of reasonable alternatives. Final design may proceed upon NEPA approval</p>					

Two options for federal design funding; single phase and two phase

There are two caveats for design in relation to NEPA approval are down at the bottom

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Federal Authorization for Preliminary Engineering (PE)

No preliminary design activities shall be undertaken that (1) have an adverse environmental impact, or (2) limit the choice of reasonable alternatives. Final design may proceed upon NEPA approval

- 1) This is typically not an issue as “engineering” does not adversely impact the environment. Also, we “clear” for geotechnical and other ground disturbing preliminary design activities
- 2) This language relates to alternatives under NEPA review such as those included in an Environmental Impact Statement (EIS) [or Environmental Assessment (EA)]
 - Projects cleared with a categorical exclusion (CE) do not have “NEPA alternatives” such as for a new corridor but there are still environmental impacts that have to be considered and could affect design

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- 23 CFR 771.113 - Timing of Administration Activities
 - (a) The lead agencies...will perform the work necessary ... during the NEPA process....environmental studies, related engineering studies....However, **final design activities, ... shall not proceed until the following have been completed.**
 - Regulation says approved 'CE, FONSI or Final EIS required for Final Design'
 - However, there is no definition of final design is in the regulation

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➤ 23 CFR 636 – Design-Build Contracting

- These regulations have definitions of preliminary design and final design
- The core reason for these regulation definitions is that a design-build contractor not advance final design when environmental review is not yet completed [bullet 2 on PE authorization]
- Note; “Preliminary engineering (PE)” includes *preliminary design* and *final design*. It’s “preliminary engineering” to distinguish from “construction engineering” funds

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- 23 CFR 636.103 (Highways – Design Build Contracting)
- ***Preliminary design*** defines the general project location and design concepts... preliminary engineering *Prior to completion of the NEPA review process, any such preliminary engineering and other activities and analyses must not materially affect the objective consideration of alternatives in the NEPA review process.*
 - Remember the ‘Bullet 2’ language in PE authorization

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➤ 23 CFR 636.103 (cont.)

- If design alternatives are not under consideration then preliminary design can continue prior to approval of the CE
- But, if environmental review is not yet complete ADOT must assess whether or not impacts under other environmental laws [ESA, CWA, Section 4(f), etc.] could affect design
- Example; Not yet completed ESA consultation or 404 could pose a risk (are there any design alternatives still under consideration that could be affected by the outcome of environmental review?)
 - This is relevant for a very small number of projects
 - This risk assessment is very simple and revolves around PM and Environmental Planning coordination/communication

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FHWA Authorizations - Preliminary Engineering (PE) funds for project development

- Phases of project development

- Preliminary Design

- Project Scoping, Geotechnical Investigations, Engineering & Environmental Studies(NEPA) and preliminary plans

- EA/EIS projects Preliminary Design ends with FONSI/ROD

- 15% (DCR) or 30% (Stage II) for ADOT projects

- Final Design

- Final plans

- This leaves the question: When does Preliminary Design end and Final Design begin for CE-level projects?

- [up to 95%]

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Now we relate the definitions of design to the authorizations for PE funds (two phase or single phase authorization)

- Two Phase – Major Project (Individual CE/EA/EIS)
 - Phase 1: Preliminary Design (30%) and NEPA approval
 - Phase 2: Final Design (design past 30% needs NEPA approval)
- Single Phase – Preservation and Minor/3R (CE projects)
 - One authorization for PE (Preliminary Design, NEPA, Final Design)
 - Remember the two bullets at the bottom of the authorization

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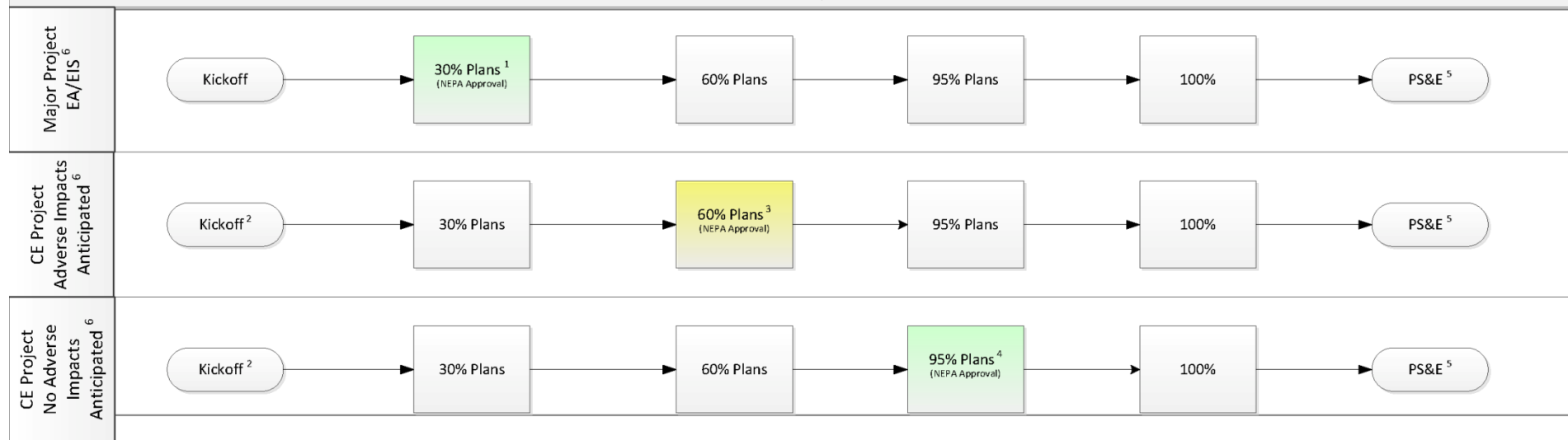
For “Single Phase” Authorizations and most projects processed with a CE:

- We want to avoid delay of design during the project development process but keep the “bullets” in mind
- CE approval is typically attained between 30% and 95% Design but *prior to 100%*
 - Assessment of environmental risk when advancing design past 60%.
 - This risk assessment is very simple and revolves around PM and Environmental planner coordination/communication
 - *Redesign* as a result of environmental decision is not eligible for federal-aid

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ADOT Environmental Planning Group
 NEPA Approval In Relation To Final Design
 (How Far Preliminary Design Can Advance)

December 24, 2014



- Consideration of NEPA approval in relation to Design
- Graphic is in the ADOT Environmental Planning Project Development Procedures

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Sample Problem 1

Passing Lanes Project (CE)

‘May affect, likely to adversely affect’ (ESA Section 7)

135 days (by regulation) formal consultation with USFWS did not delay design (no “put your pencils down” time)

Proceeded with Preliminary Design to 95% in advance of the CE approval.

Close Project Team coordination

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Sample Problem 2



Bridge Replacement Project (CE)

'Adverse effect' (Section 106)

Programmatic Section 4(f) for Bridges
requires evaluation of alternatives

Proceeded with Preliminary Design to 95% in advance of the CE approval after Section 106 completion but in advance of completing Programmatic Section 4(f) Evaluation.

Close Project Team coordination