

Operations & Engineering Workgroup

August 10, 2022



Agenda

- Action items from July 12, 2022 meeting
 - Future topic to discuss status of power and system impact study
 - Future topic to discuss reservoir management as it approaches deadpool
 - Future topic to discuss recreation considerations in reservoir operations management
- 1.1 Approach to implementing the Amendment 3 “rolling” cost estimate
- 1.2 Assumptions used in development of a master schedule through project completion

Material Change Categories for Today's Topics (Bylaws)

Approach to implementing the Amendment 3 “rolling” cost estimate

- ✓ Direct Construction Cost

Assumptions used in development of a master schedule through project completion

- ✓ Construction Schedule

- ✓ Direct Construction Cost

Agenda Item 1.1

Approach to implementing the Amendment 3 “rolling” cost estimate

JP Robinette

Why a “rolling” cost estimate?

- The Feasibility Project Cost Estimate was approved by the Board in June 2021
 - Based on limited mapping and geotech data in development of the feasibility design
- Preliminary Engineering to be completed in 2024
 - Supported by additional survey/mapping and geotech data
- A “rolling” cost estimate may inform decision making and/or policy guidance required before 2024
 - Plan of Finance September Workshop

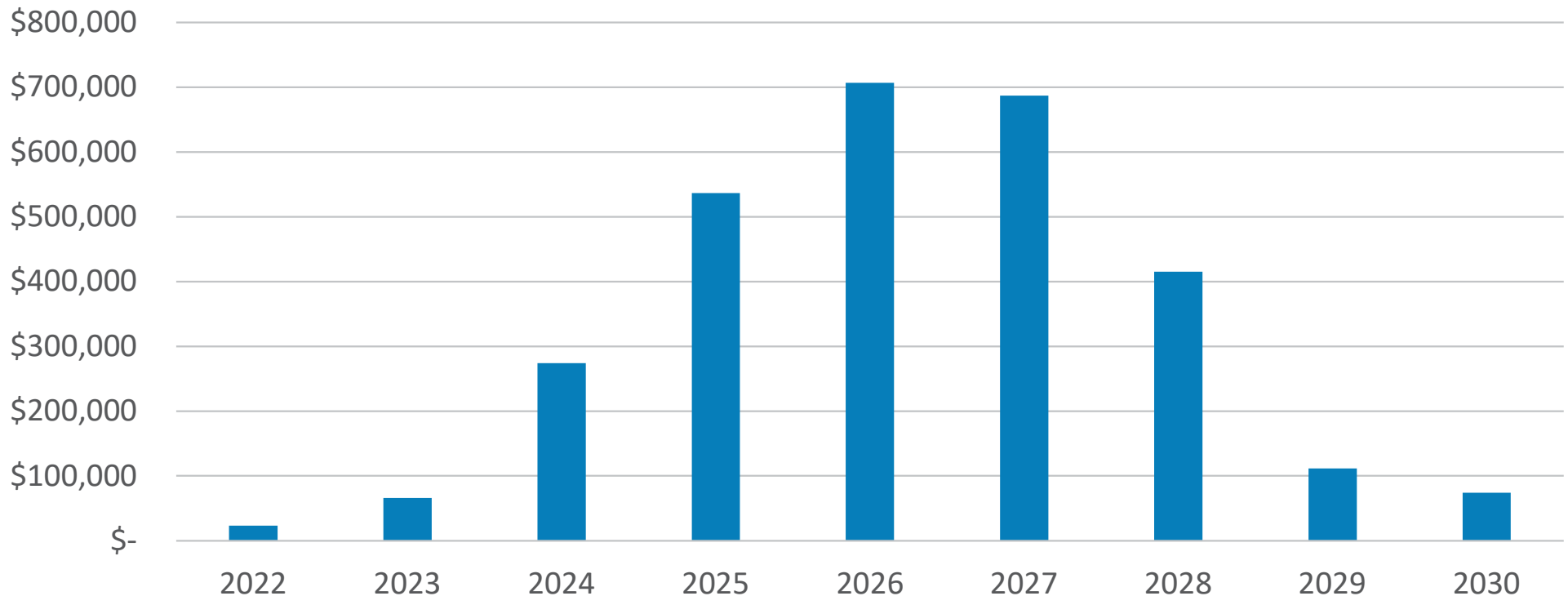
Plan of Finance September Workshop

Preliminary Agenda topics

- Amendment 3 “Rolling” Cost Estimate Approach
- Value Engineering Opportunities
- Market Conditions (construction, finance, water)
- Project Schedule and Delivery Methods

Our delivery decisions and pace move the needle (July 2021 Plan of Finance Workshop)

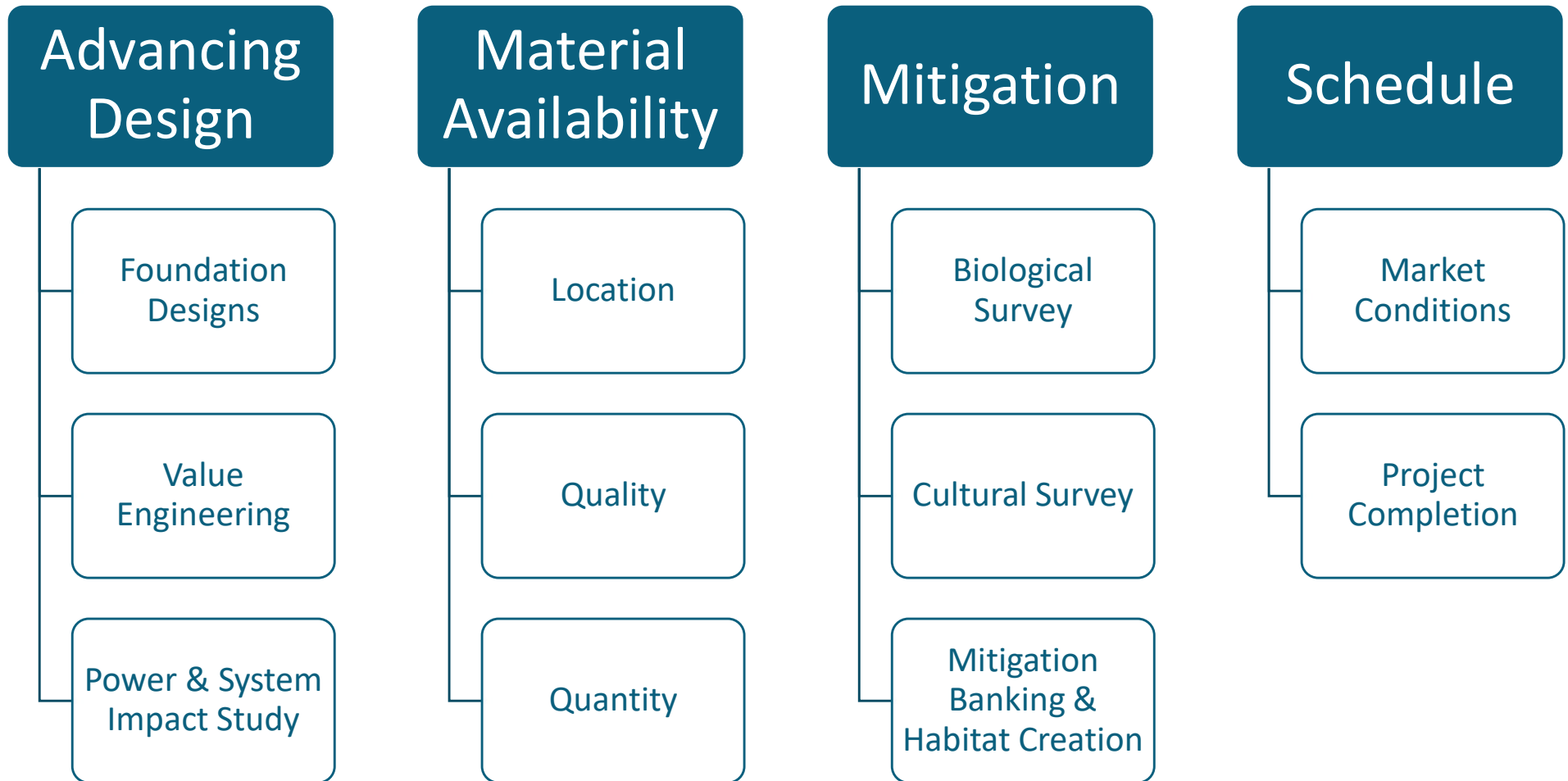
PARTICIPANT SHARE CONSTRUCTION COSTS (\$1,000s, 2021\$)



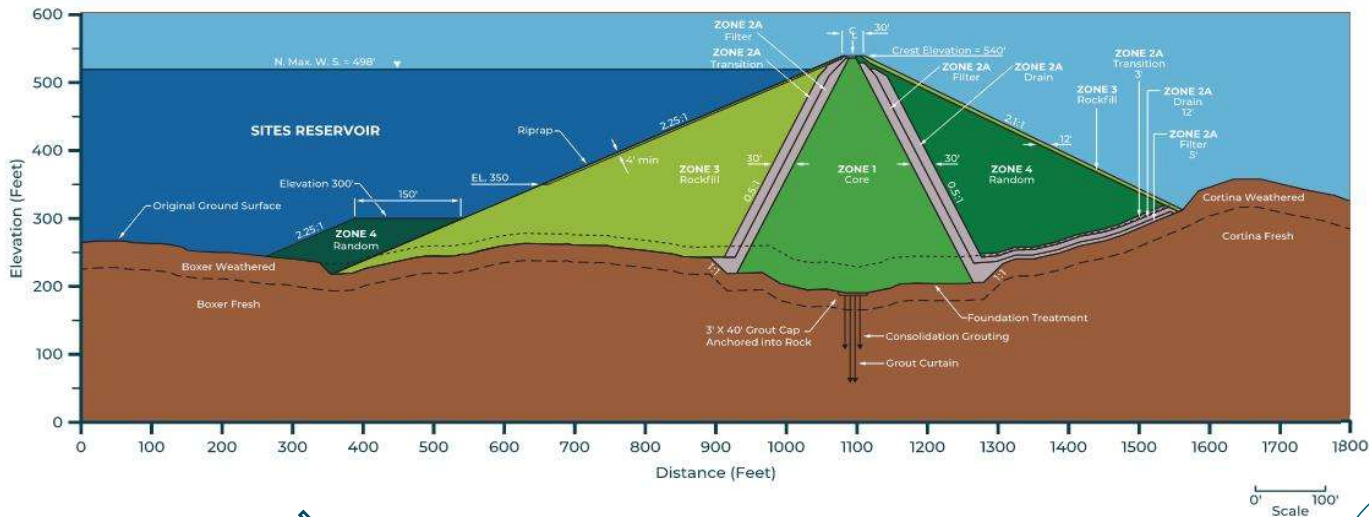
Delivery considerations (assumes financing participants):

- Timing of locking **interest rates** \pm 10%
- Increased construction cost **escalation** by 0.5% increases annual costs by 3.5%
- Each additional \$100M in **construction costs** increases annual costs by 3.4%

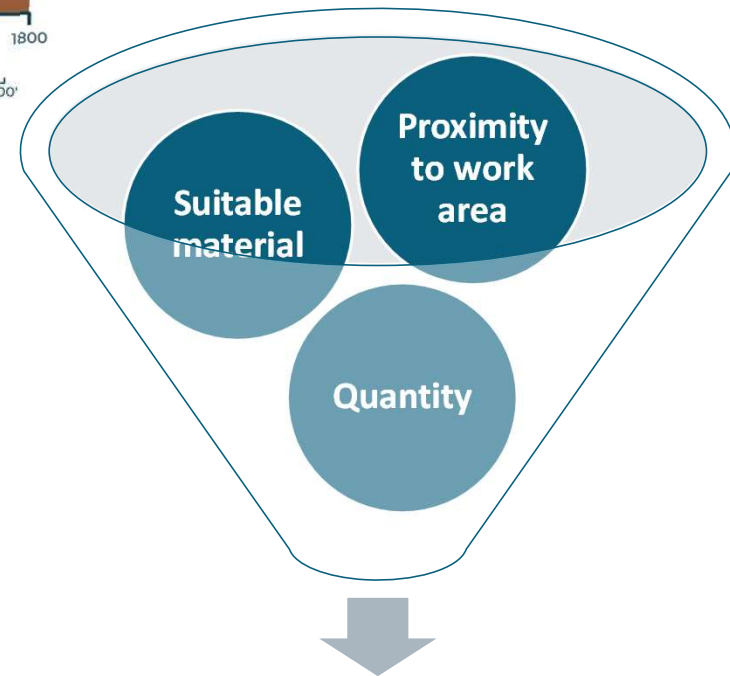
Cost Drivers



Moving the Needle: Advancing Design



- Dam Zone 1: Core
- Dam Zone 2: Filter & Drain
- Dam Zone 3: Rock
- Dam Zone 4: Random Fill
- Roads: Aggregate Base



Material Cost Driver

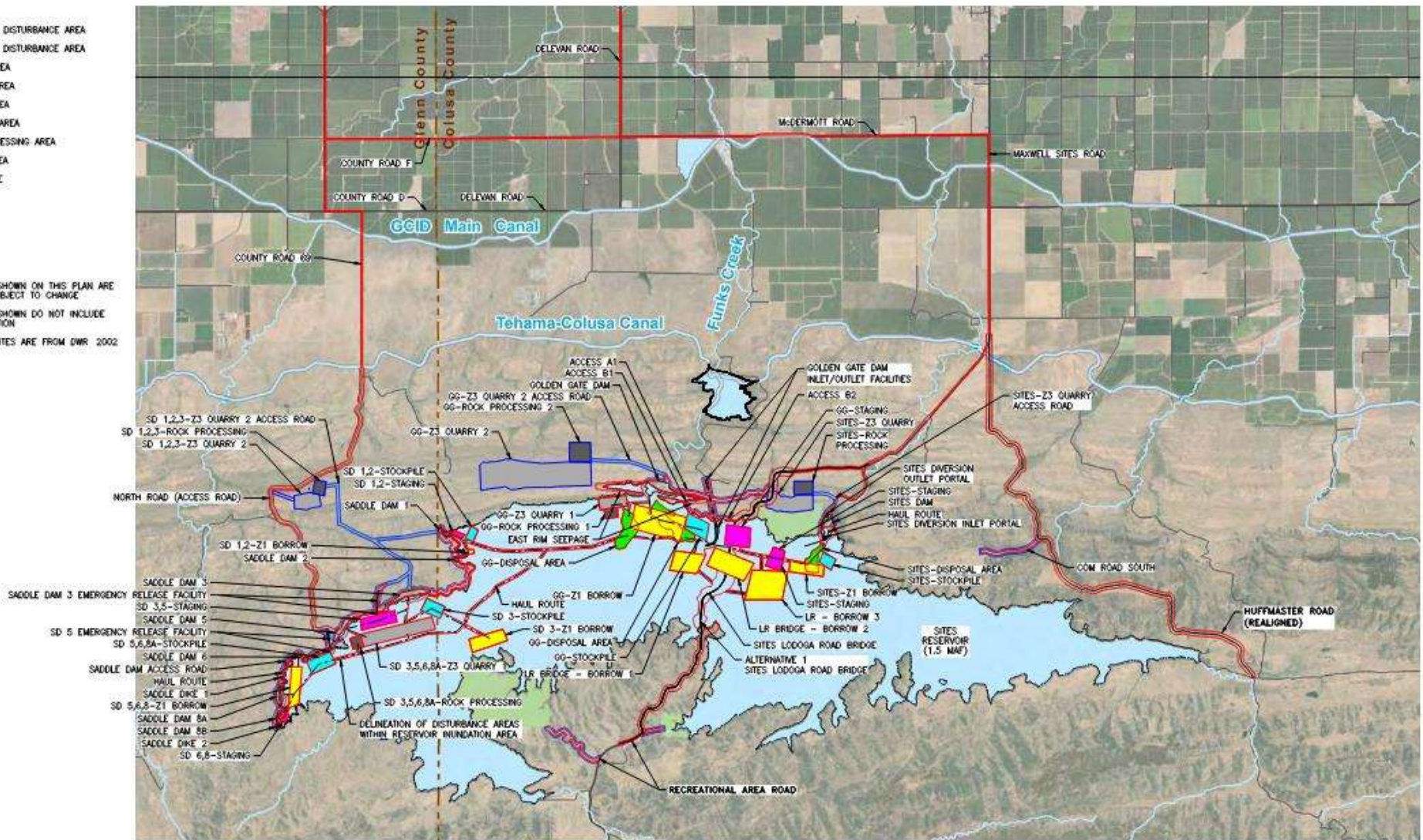
Moving the needle: Material Availability

LEGEND

	TEMPORARY DISTURBANCE AREA
	PERMANENT DISTURBANCE AREA
	BORROW AREA
	DISPOSAL AREA
	STAGING AREA
	STOCKPILE AREA
	ROCK PROCESSING AREA
	QUARRY AREA
	HAUL ROUTE

NOTES

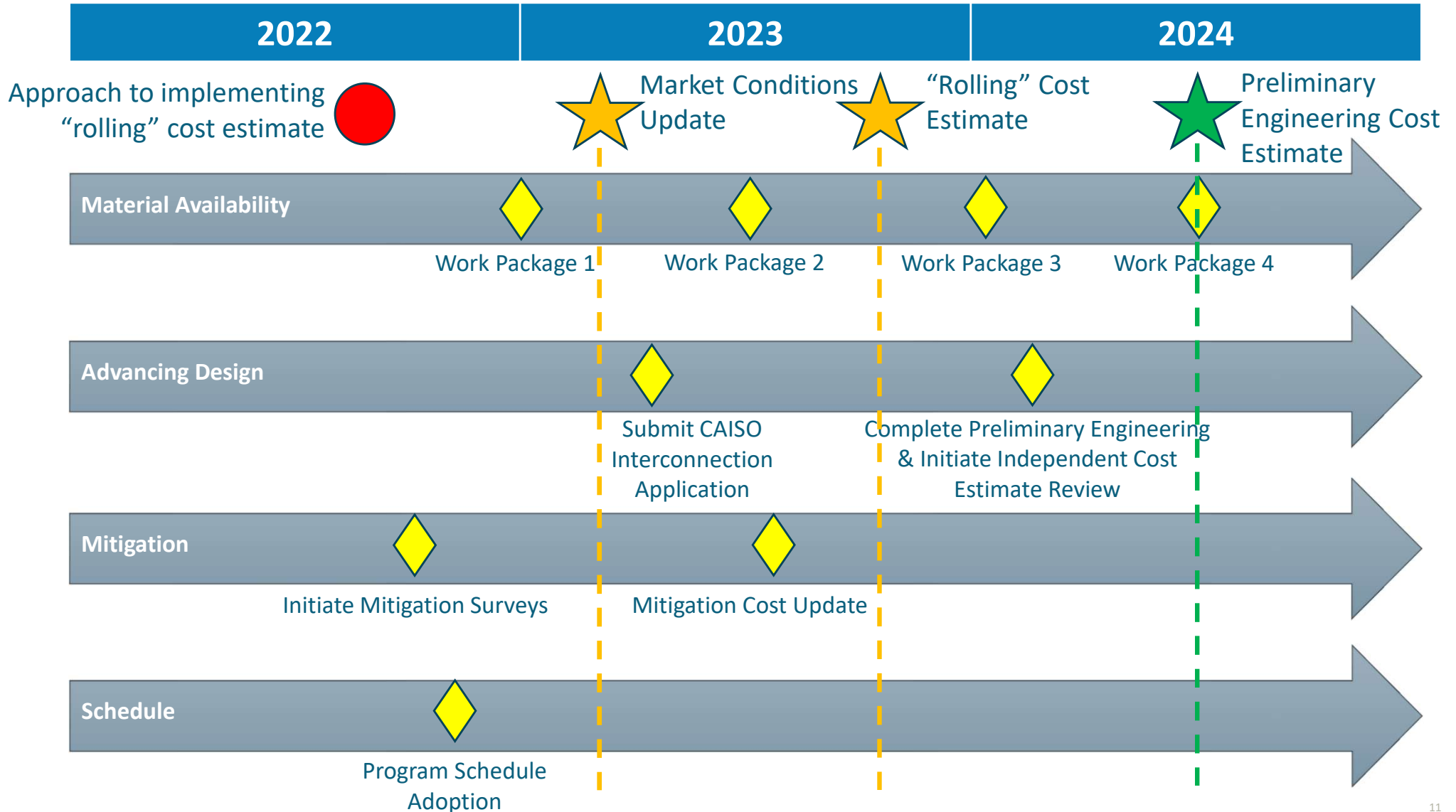
1. DISTURBANCE LIMITS SHOWN ON THIS PLAN ARE APPROXIMATE AND SUBJECT TO CHANGE
2. DISTURBANCE LIMITS SHOWN DO NOT INCLUDE CLEARING OR DEMOLITION
3. POTENTIAL BORROW SITES ARE FROM DWR 2002



HAUL ROUTES, BORROW, AND ROCK PROCESSING AREAS
SCALE: NTS



Amendment 3 “rolling” Cost Estimate Milestones



Questions?

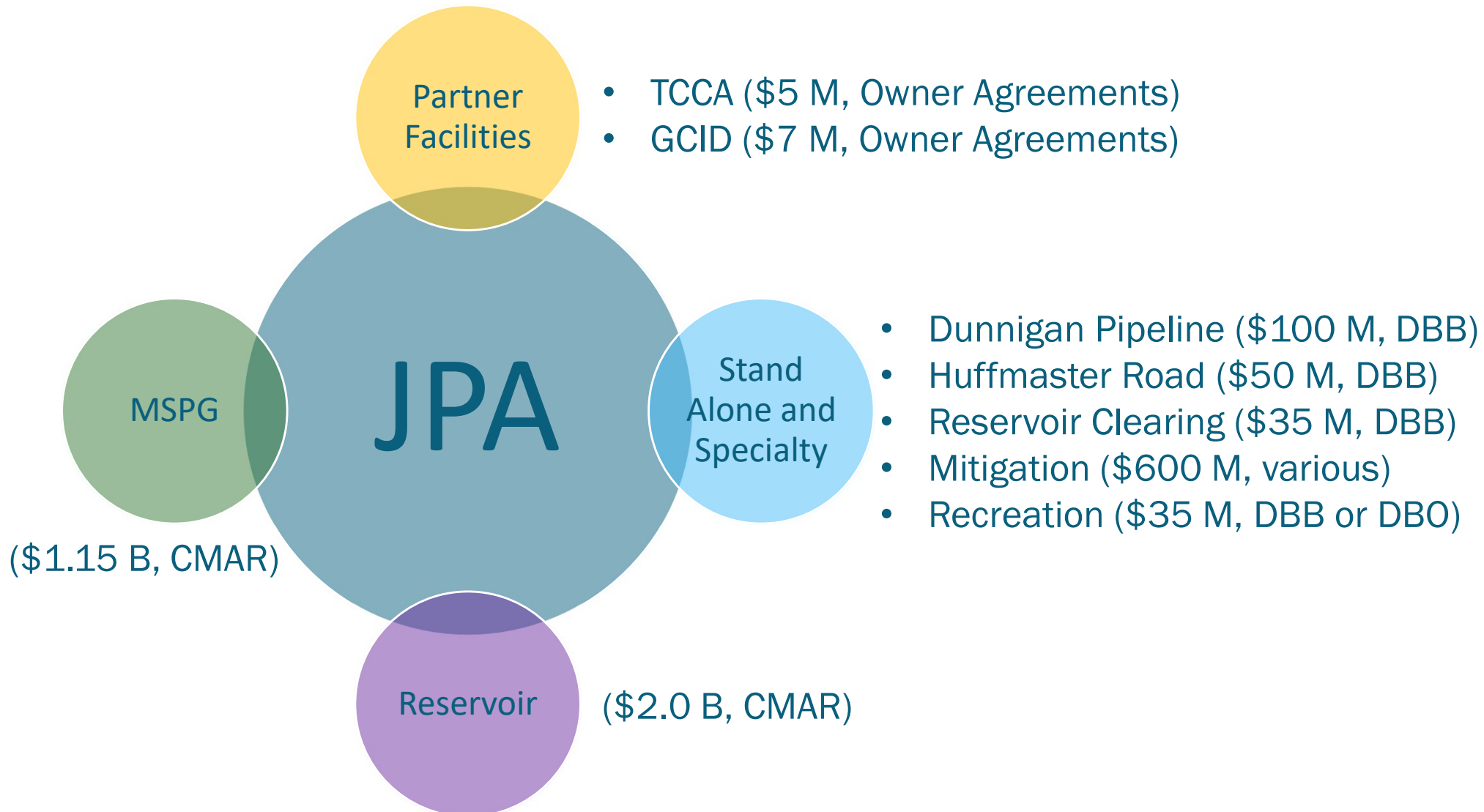


Agenda Item 1.2:

Assumptions used in the development of a master schedule through project completion

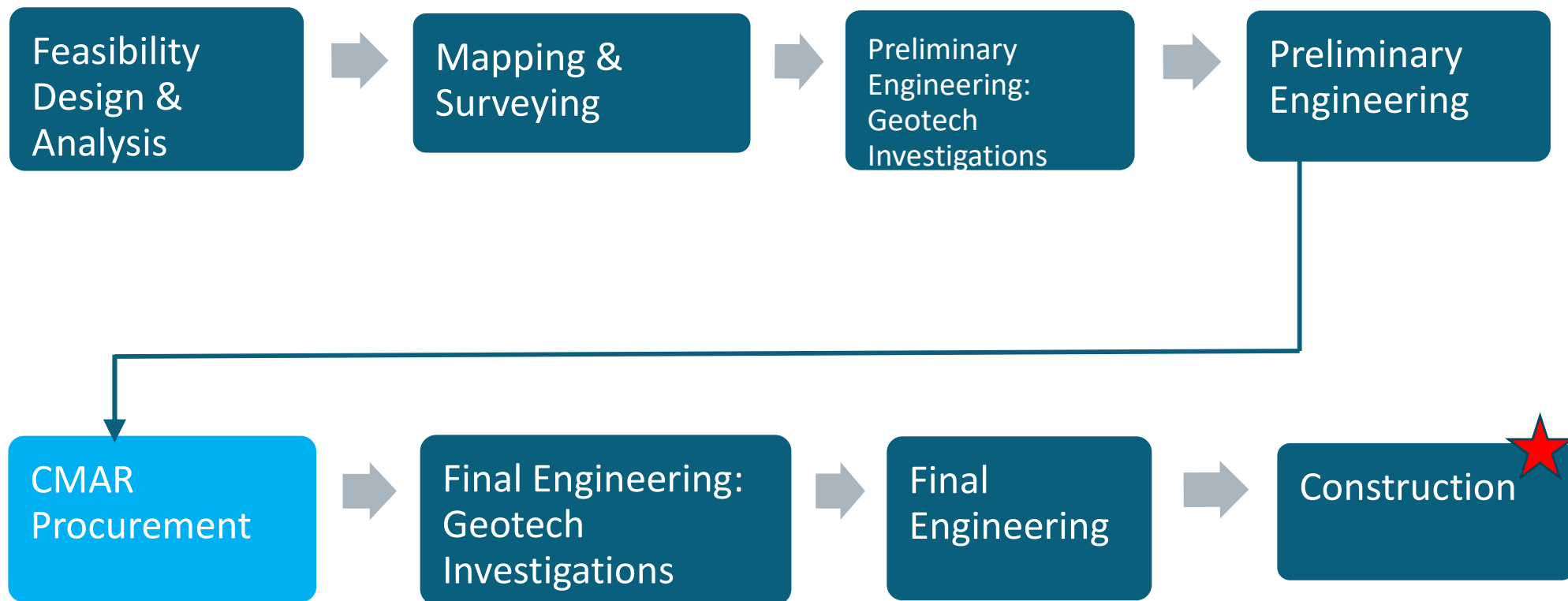
JP Robinette

Alignment with Contract Strategy



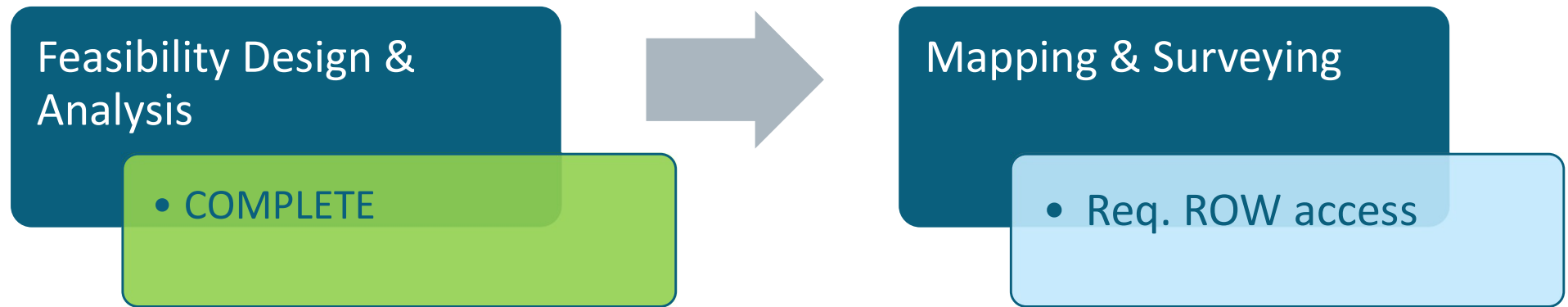
Advancing Engineering & Construction

overview



Advancing Engineering & Construction

steps 1 and 2

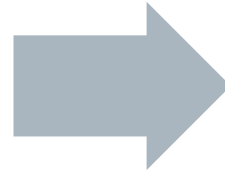


Advancing Engineering & Construction

steps 3 and 4

Preliminary Engineering: Geotech Investigations

- Req ROW access and environmental permits to execute geotech activities



Preliminary Engineering

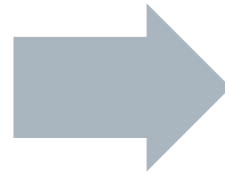
- Preliminary Engineering Design & Coordination
- Agency Reviews: Federal, State, County, and facility owners

Advancing Engineering & Construction

steps 5 and 6

CMAR Procurement

- Req. Authority guidance and approval to implement contract and procurement policies
- Typically occurs after Preliminary Engineering and before Completion of Final Engineering



Final Engineering: Geotech Investigations

- Req ROW access and environmental permits to execute geotech activities

Advancing Engineering & Construction

steps 7 and 8

Final Engineering

- Final Engineering Design and Construction Contract Documents
- Agency Reviews and Approvals: Federal, State, County, and facility owners



Construction



- Req. completion of property acquisition
- Req. completion of environmental surveys
- Req. completion of mitigation actions
- Req. approval of construction and environmental permits

Policy Questions for Development of the Master Schedule

- **Contracting and Procurement** – what are the assurances required to initiate CMAR procurement?
 - Assuming execution after investor commitment
- **Construction Phasing** – should construction packages be scheduled independently to be completed as quickly as possible, or resource balanced based on the critical path construction package?
 - Assuming resource balance based on the critical path construction package

WSIP Benefits and 2030 Timeframe

- The WSIP Application used the State provided hydrology data that shows benefits beginning in 2030
- Recognizing project benefits by 2030 is not a statutory requirement

Next Steps

- Coordinate with real estate and permitting teams in preparation of the Master Schedule update
- Focus on managing costs and risk, while remaining aggressive with overall schedule
- Identify required work plan update(s) based on adopted Program Schedule (October 2022)
- Recommend work plan update(s) for RC/AB approval (November 2022)
- Implement work plan update and execute Task Order amendments as needed (December 2022)

Questions?



Thank you!

Next Meeting: Wednesday, October 12, 2022 (1:30 pm – 3:30 pm)

