



IDAHO WATER RESOURCE BOARD

MOUNTAIN HOME AIR FORCE BASE Water Resilience Project

Balancing a high profile
multifaceted fixed price
design-build project



Jason Hurless, P.E.
Design Manager



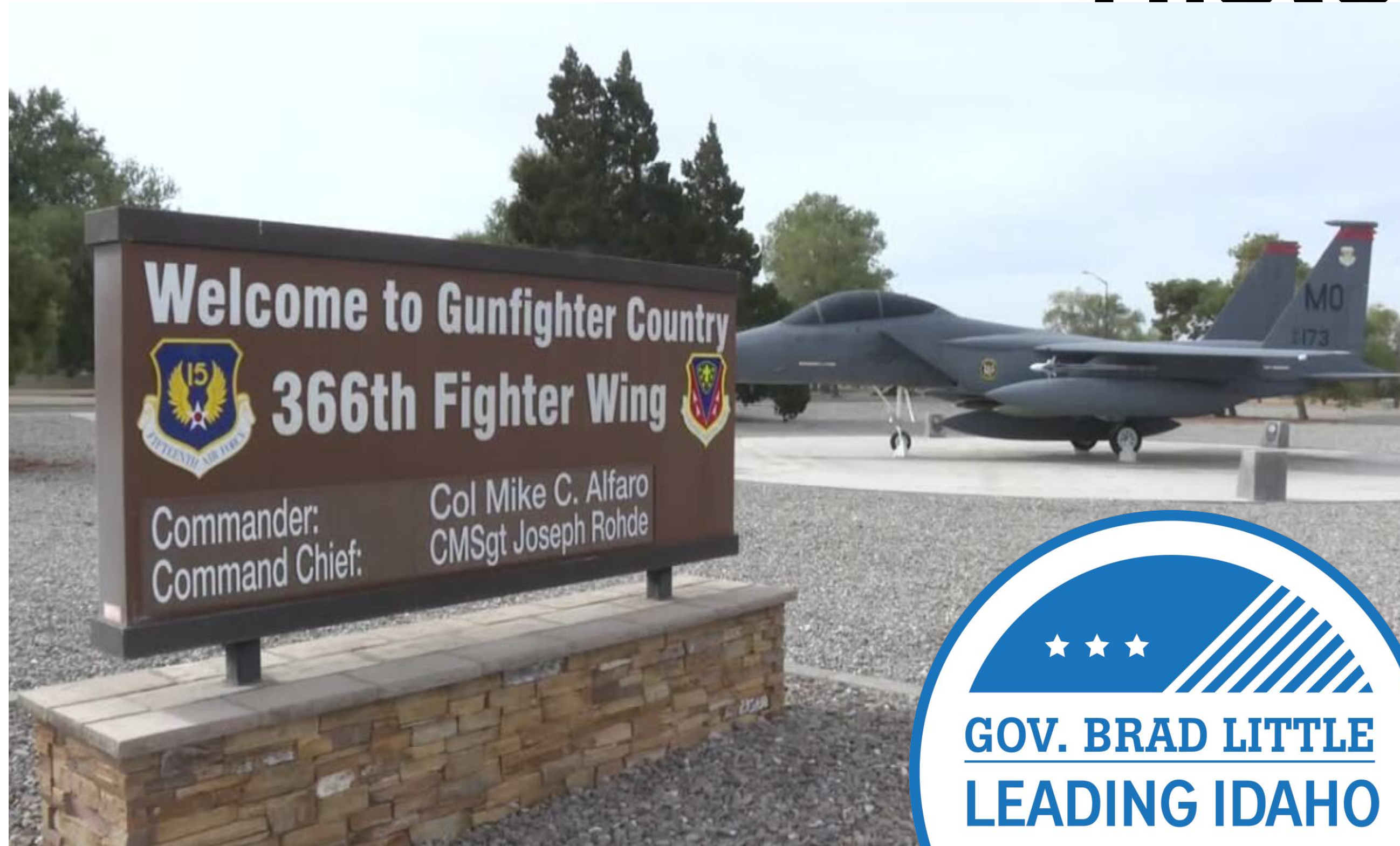
Erik Boschulte, P.E., assoc. dbia
Preconstruction Manager

Agenda



- Background & history
- Team and stakeholders
- Schedule
- Permitting & environmental requirements
- Design & construction challenges

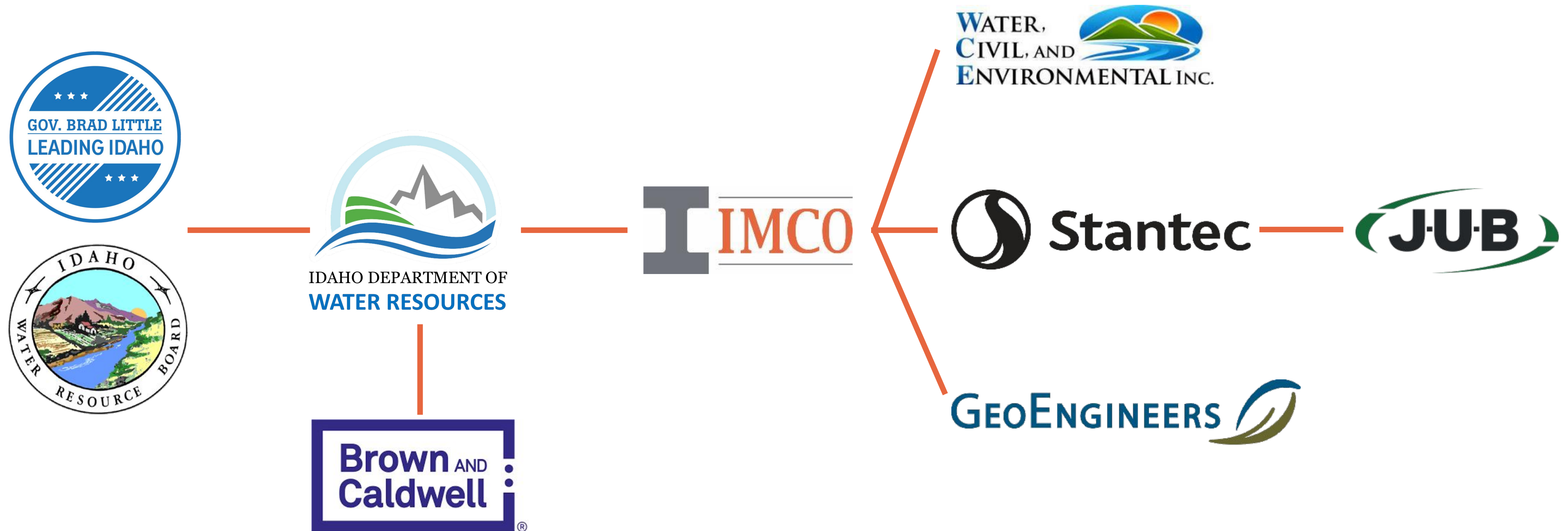
Project Background & History



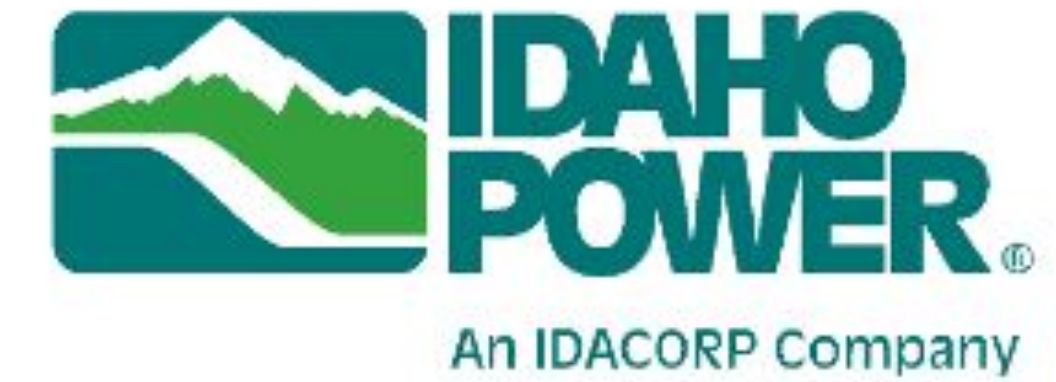
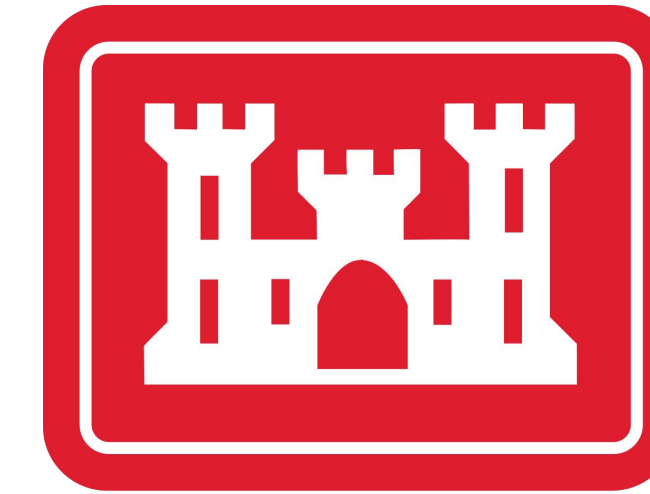
Mountain Home Air Force Base (MHAFB)
water supply & declining aquifer

- Importance to national security and military readiness
- \$1 Billion annually to local Idaho economy
- 2014: State purchased Snake River water rights
- 2022: State passed bill funding pump station & water conveyance Project
- 2023: IWRB/IDWR Design-Builder procurement & Project start

Project Team Structure



Project Stakeholders



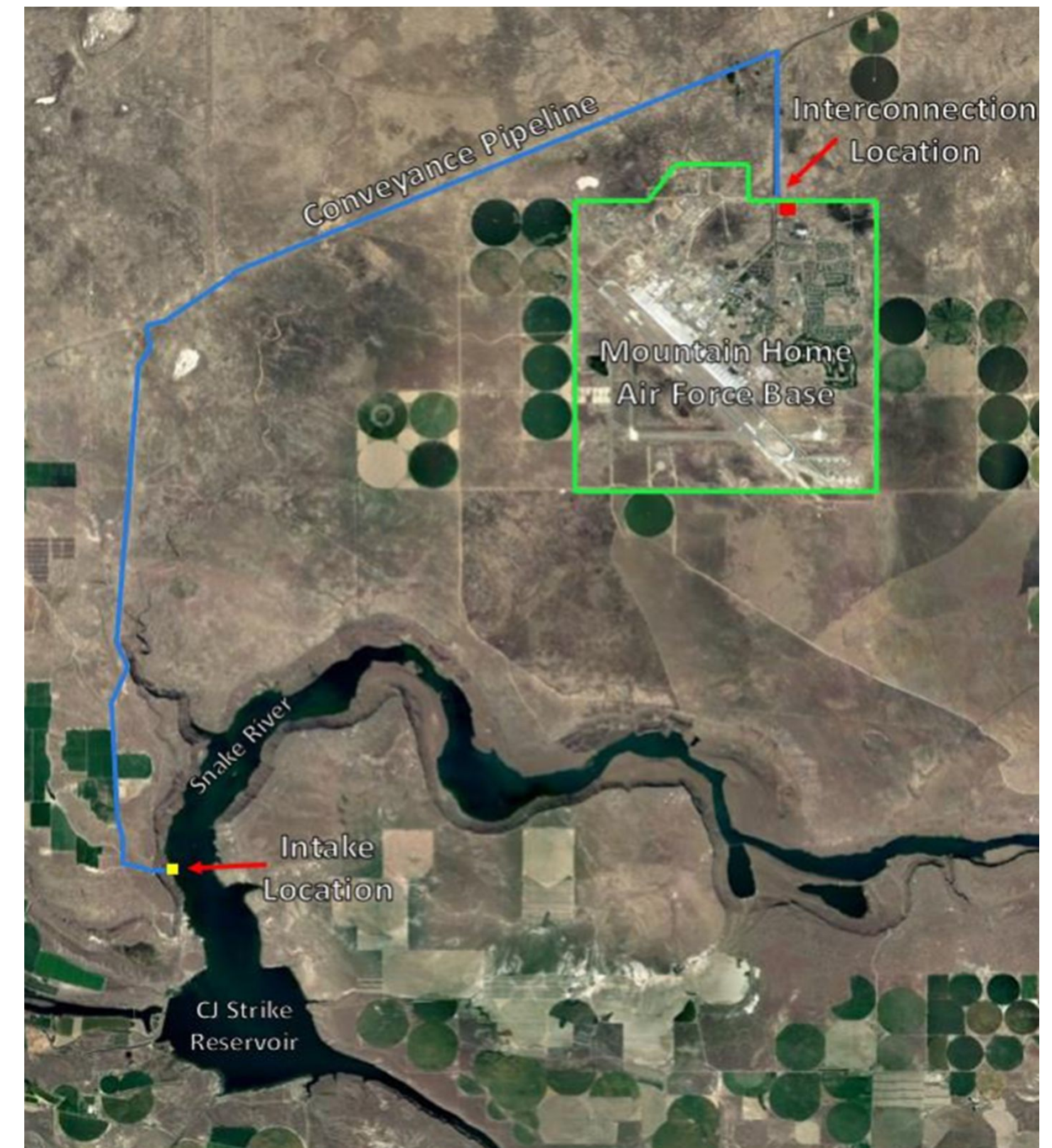
Project Scope

Pipeline

- 15 miles from pump station & intake to future MHAFB WTP site
- Multiple bored crossings of roads & highways

Pump Station & Intake

- CJ Strike Reservoir
- 3.64 MGD pumping capacity
- Dual-intake & screens
- Pump station building
- Emergency generator
- New power service
- SCADA & fiber interconnect with MHAFB



Project Schedule

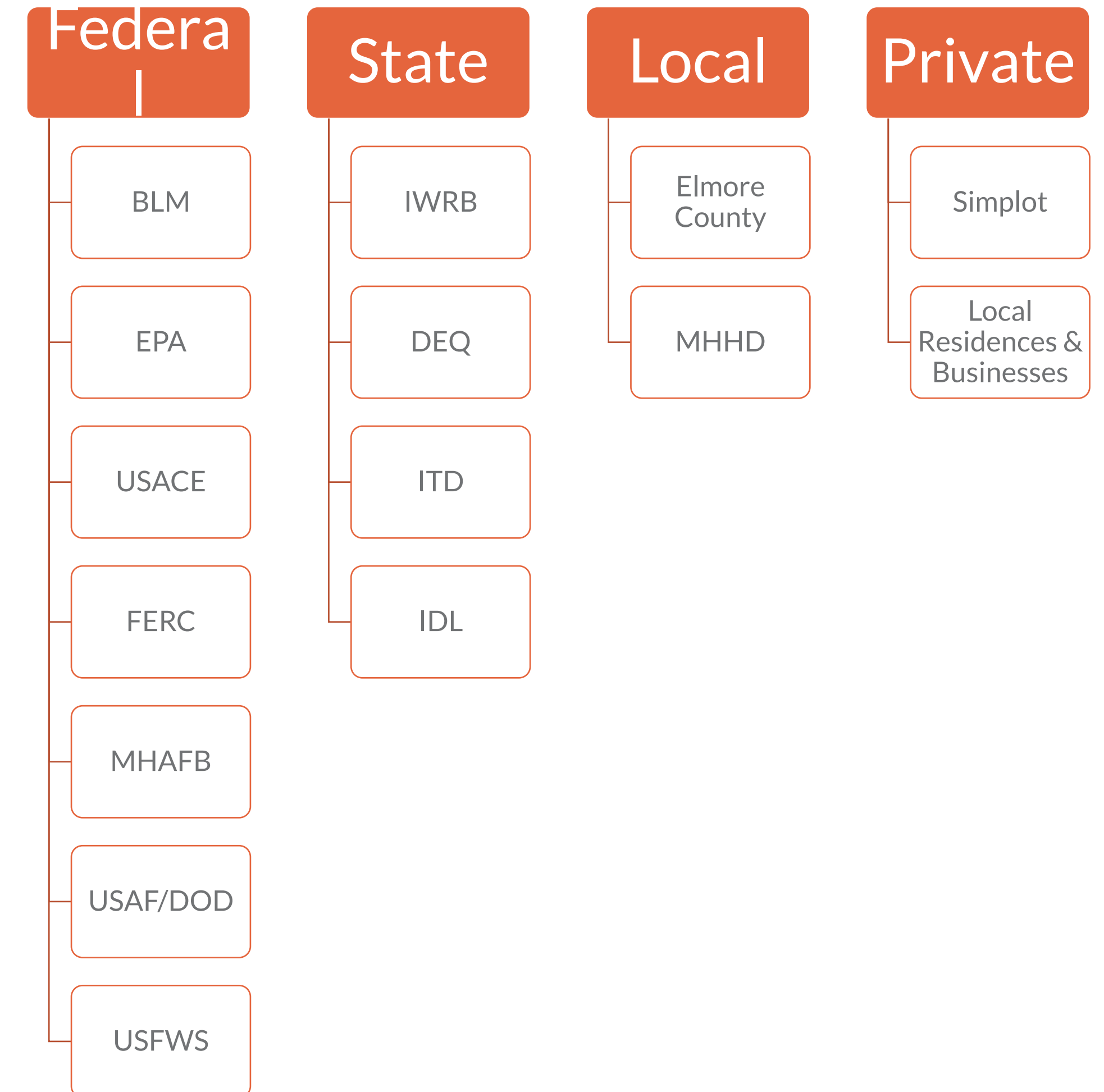


Approach to Design-Build Schedule Management:

- Prioritize key design criteria and major scopes of work
- Focus on scope and details pertaining to permit requirements
- Front-load design of early procurement and long lead items
- Align design with construction sequence

Permitting & Environmental

- Owner & Design-Builder responsibility matrix
- Multiple stakeholders with varying interests
- Schedule risk and driver
- Permitting & biological team



Design Challenges



- Fast-paced design schedule
- Permitting & ROW constraints
- Team zippering and Integrate the construction feedback
- Supply chain and procurement constraints
- Department of Defense specifications
- USACE, Air Force, IWRB, MHAFB design review
- MHAFB WTP coordination

Early Procurement



Pipeline

- HDPE pipe
- Steel pipe

Electrical

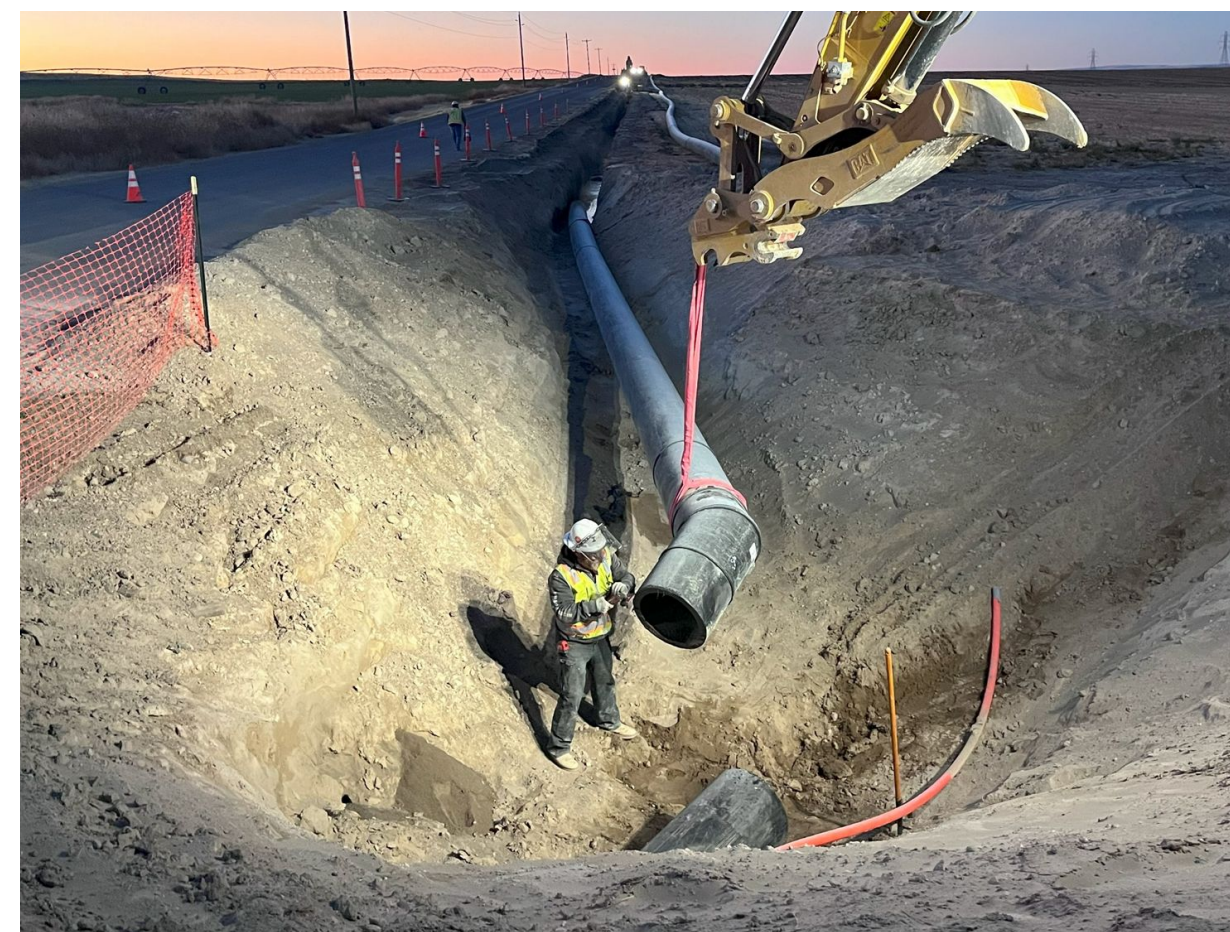
- VFDs
- Electrical switchgear
- Utility transformer
- Emergency generator

Mechanical

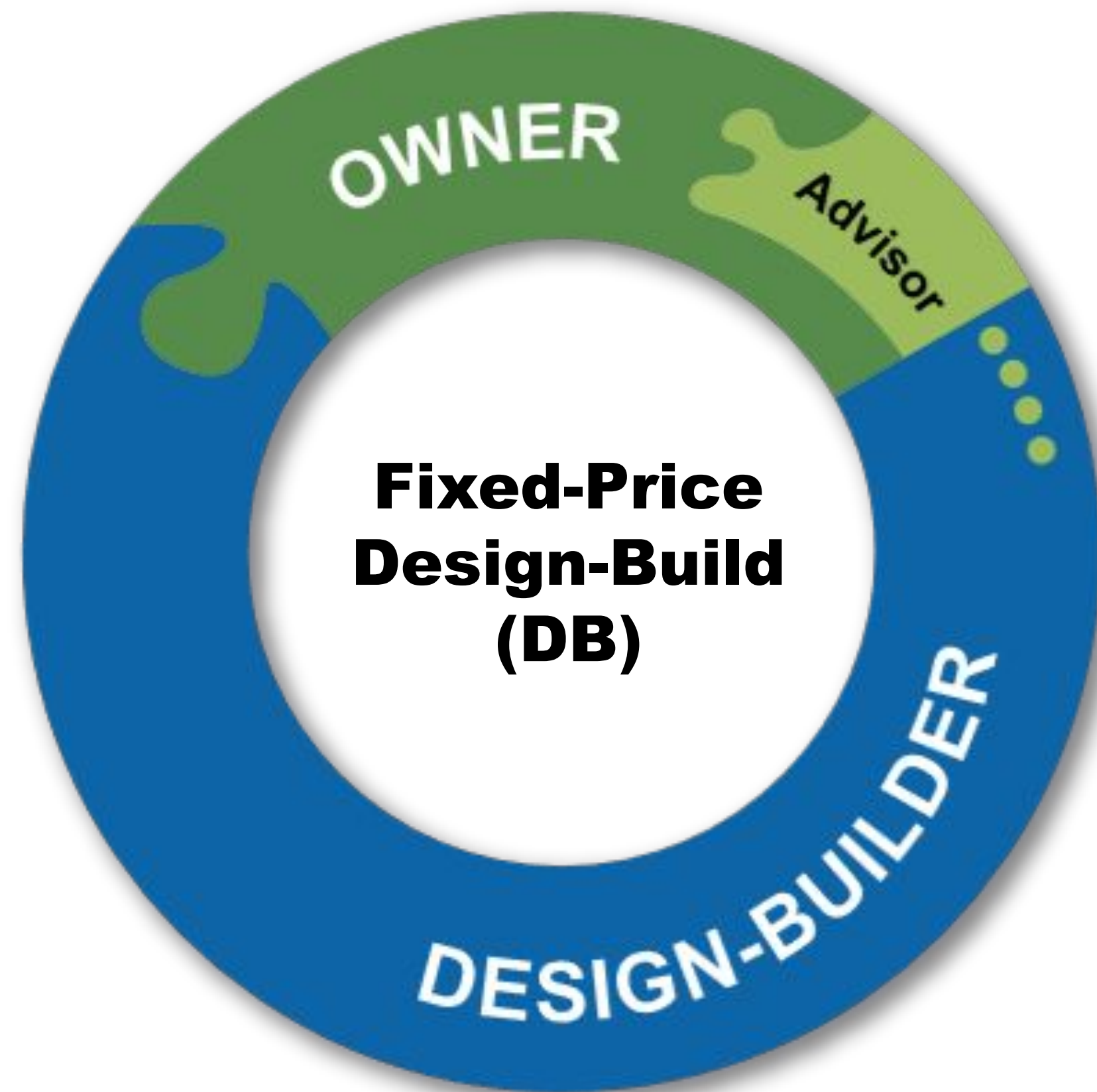
- Pump station pumps
- High Pressure Valves

Construction Challenges

- Pipeline trenching & bedrock
- Trenchless borings
- Canyon rim steel pipeline
- Pump station site
- Intake pipes and screens



Fixed-Price Design-Build delivery



Fixed-Price Design-Build Offers:

- Single point of accountability for performance
- Up-front pricing to Owner
- Innovation by design-build team
- Accelerated schedule

Fixed-Price Design-Build Requires:

- Well-defined scope & RFP documents
- Supplementary investigation and data

Achievements & Lessons Learned

- Successfully coordinated with over 10 different agencies and stakeholders
- Installed 15 miles of pipe in 6-months
- Permitting: Keep your teammates close, but your regulatory agencies closer
- Collaboration and communication with project team and stakeholders
- Employ innovative ideas and value engineering to design to budget





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Questions?

