



Engineering, Operations, & Technology Committee

Gene Communication System Upgrade

Item 7-4

November 13, 2023

Item 7-4 Gene Communication System Upgrade

Subject

Award a contract to construct a new fiber optic cable line from Parker Dam to Gene Pumping Plant & amend an agreement for technical support during construction

Purpose

Improve data transmission speed, reliability, & resiliency

Recommendation and Fiscal Impact

Recommendation – Award a \$1,244,935 contract to HP Communications Inc. to construct a new fiber optic cable line & authorize an increase of \$176,000 to an existing agreement with HDR Engineering Inc. Expenditure of \$2.28 million in budgeted capital funds

Budgeted

Location Map



Gene Plant Communication System Upgrade



Background

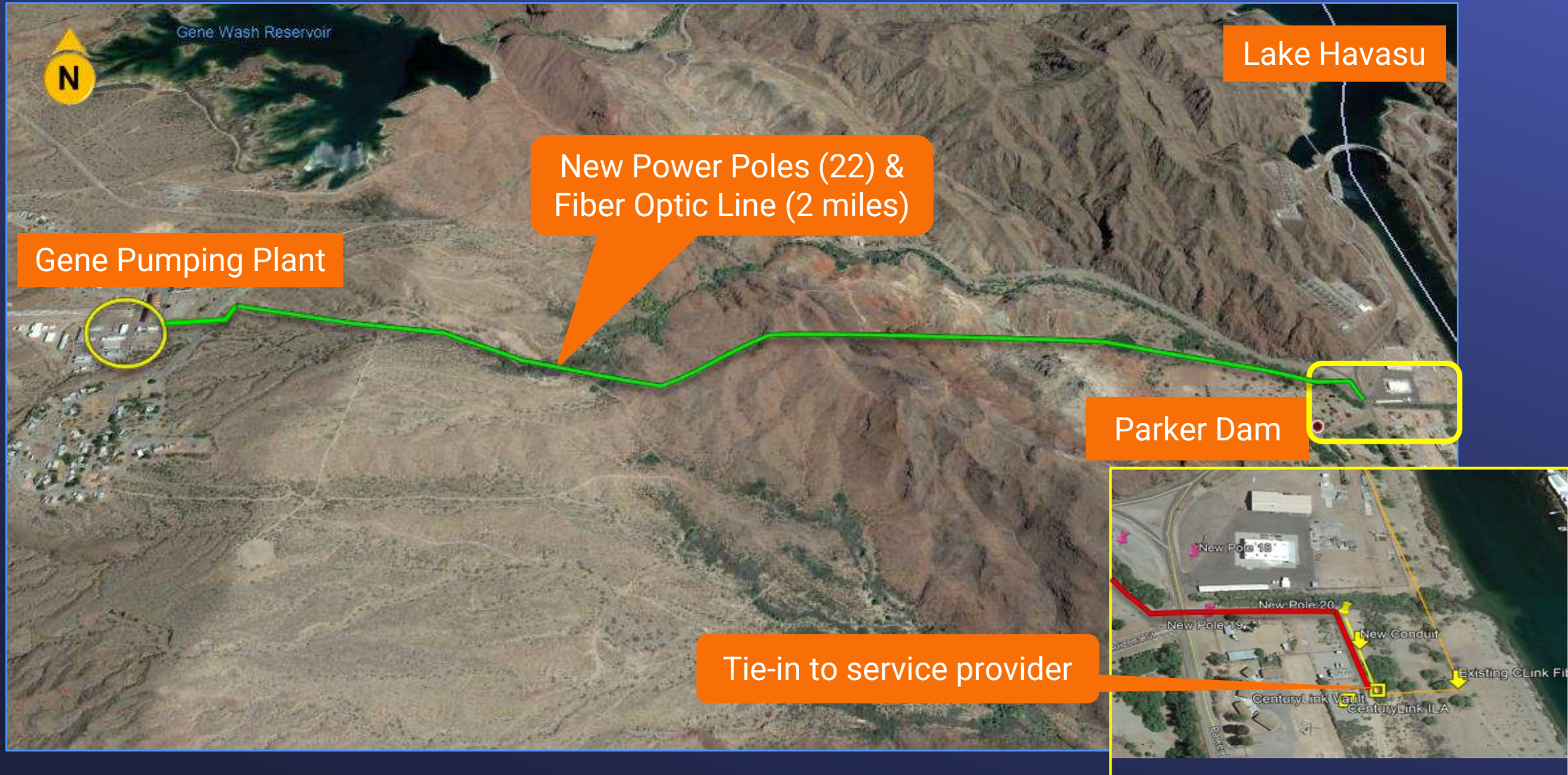
- Desert microwave radio WAN system constructed in the 1990s
 - Transmits data, voice, video, & command signals to operate its distribution & business systems
- New fiber optic connection will
 - Improve speed & video surveillance resolution
 - Allow access to more innovative cloud apps
 - Improve communication system speed, reliability & resiliency
 - Provides critical redundancy to the existing desert WAN system
- Final design complete

Gene Plant Communication System Upgrade

Alternative Considered

- Add third WAN path between Parker Dam & Gene Plant
 - Does not take advantage of technology improvements
- Selected Alternative
 - Install fiber optic cable to provide critical redundancy at Gene Plant
 - Improves internet service for desert employees at Gene Plant

Fiber Optic Alignment



Gene Plant Communication System Upgrade

Scope of Work

- Contractor
 - Install two miles of fiber optic line from Parker Dam to Gene Pumping Plant
 - Install 22 new overhead poles
 - Demolish four existing poles
 - Install 1,400' of buried electrical duct bank
- Metropolitan
 - Install server router & associated equipment
 - Construction management & inspection
 - Project management & contract administration

HDR Engineering Inc. – Agreement Amendment

- Engineer of record
 - Respond to request for information
 - Review submittals
 - Advise staff on technical issues
 - Prepare record drawings
- New NTE amount: \$451,000
 - \$176,000 increase to existing agreement

Gene Plant Communication System Upgrade

Bid Results

Specifications No. 1976

Bids Received	September 21, 2023
No. of Bidders	2
Lowest Responsible Bidder	HP Communications Inc.
Low Bid	\$1,244,935
Other Bid	\$1,788,294
Engineer's Estimate	\$1,318,000
SBE Participation*	26%

* SBE (Small Business Enterprise) participation level set at 25%

Allocation of Funds

Gene Plant Communication System Upgrade

Metropolitan Labor	
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	\$ 199,000
Construction Inspection & Support	210,000
Force Construction	64,000
Submittals Review, Tech. Support, Record Dwgs.	38,000
Materials & Incidentals (Server Equipment)	125,000
Professional/Technical Services (HDR Engineering Inc.)	176,000
Contract	
HP Communications Inc.	1,244,935
Remaining Budget	223,065
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	Total \$ 2,280,000

Project Schedule



Board Options

- Option #1
 - a. Award a \$1,244,935 contract to HP Communications Inc. to construct a new fiber optic cable line from Parker Dam to the Gene Pumping Plant and
 - b. Authorize an increase of \$176,000 to an existing agreement with HDR Engineering Inc. for a new not-to-exceed amount of \$451,000.
- Option #2

Do not proceed with the project at this time.

Board Options

- Option #1

