



Engineering, Operations, & Technology Committee

Jensen and Mills Solids Removal System Rehabilitation

Item 7-3

February 12, 2024

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Jensen and Mills Solids Removal System Rehabilitation

Subject

Authorize an agreement with Stantec Consulting Services Inc. in an amount not to exceed \$1 million for preliminary design to rehabilitate the solids removal systems at the Joseph Jensen and Henry J. Mills Water Treatment Plants

Purpose

Rehabilitation of the solids removal system at the Jensen and Mills plants to improve operational functionality and reliability

Recommendation and Fiscal Impact

Authorize an agreement with Stantec Consulting Services Inc.
Fiscal Impact of \$2,300,000

Budgeted

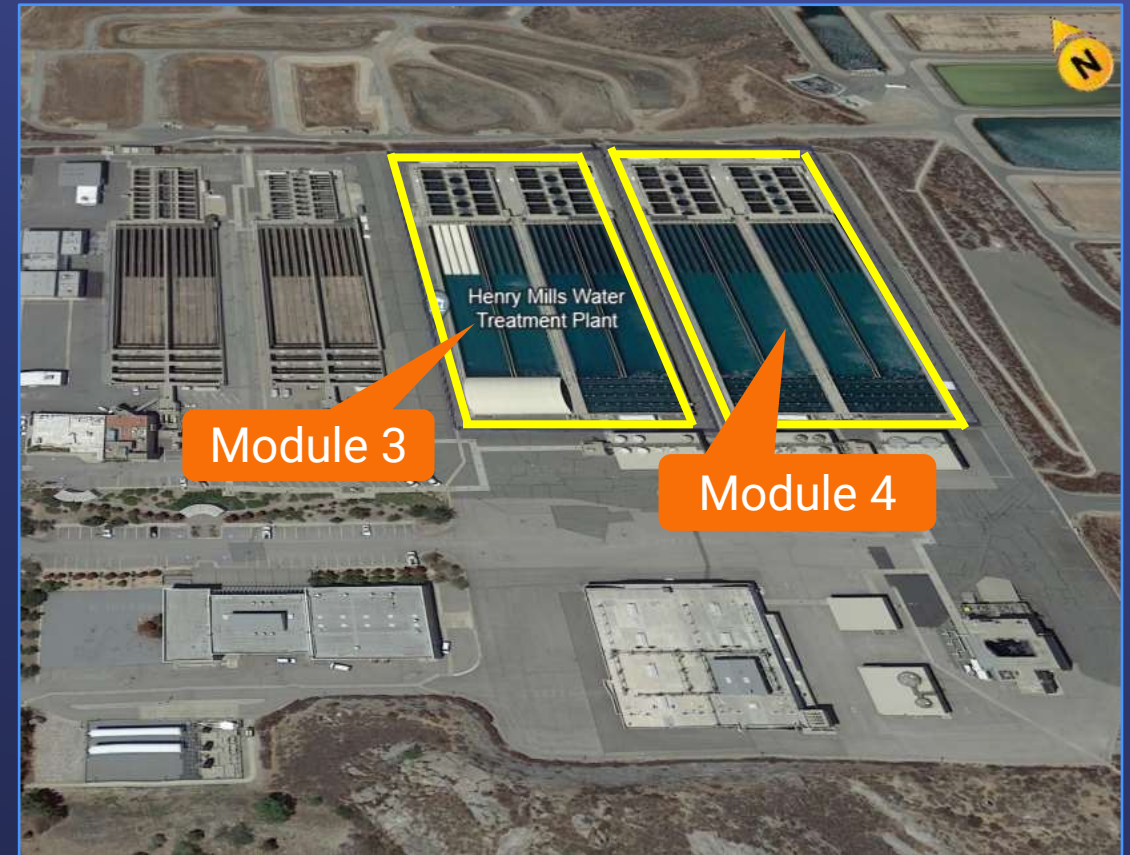
Location Map



Project Location



Jensen Modules 2 & 3 Sedimentation Basins



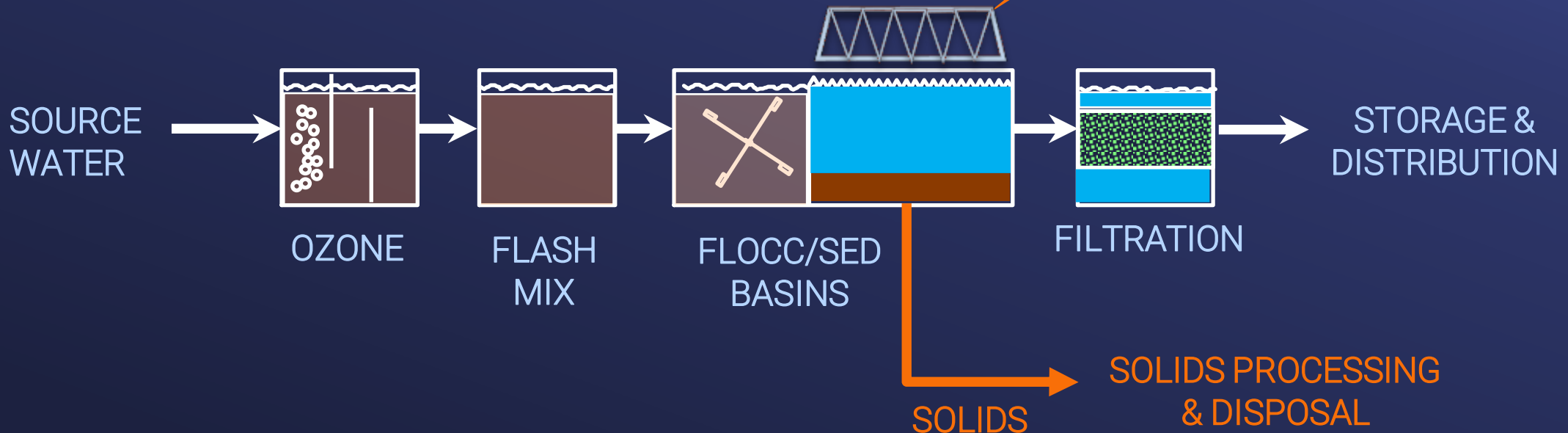
Mills Modules 3 & 4 Sedimentation Basins

Background

- Each basin is equipped with a traveling bridge to convey solids
- Solids conveyance equipment
 - Pumps
 - Sweep arms
 - Suction piping



Traveling Bridge at Jensen plant



Background – Jensen Plant

- Traveling bridge alignment problems
 - Increasing maintenance required
 - Decreased solids removal efficiency



Motor drive
at end of
service life



Gaps in rail



End-wheels
damaged

Background – Mills Plant

- Excess water in solids increases drying time
- Control system is outdated ~ reached end of service life



Existing Vacuum System



Existing Control Panel

Jensen and Mills Solids Removal System Rehabilitation

Project Scope

Jensen plant

- Replace existing traveling bridge end-truck structure & drive system
- Upgrade bridge control system & power supply
- Replace 48 basin inlet gate actuators

Mills plant

- Replace bridge assembly & upgrade with VFD
- Replace existing vacuum system with a pumping system
- Automate solids removal system

Jensen and Mills
Solids Removal
System
Rehabilitation

Metropolitan Scope of Work

- Prepare piping & instrumentation diagrams
- Perform survey
- Technical oversight
- Review of consultant's work
- Project management

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Alternatives Considered

- Metropolitan staff to complete all preliminary design activities
 - Resource needs exceed staff availability
 - Specialized technical expertise required
- Selected Alternative – Use consultant services with specialized expertise

Jensen and Mills Solids Removal System Rehabilitation

New Agreement – Stantec Consulting Services Inc.

- Selected through RFP No. 1355
- Scope of Work
 - Preliminary design services for Jensen & Mills solids removal system rehabilitation
 - Evaluation of industry standards for replacement equipment
 - Design criteria & cost estimates
 - Preliminary design report
- NTE amount: \$1,000,000
- SBE participation level: 25%

Allocation of Funds

Jensen and Mills Solids Removal System Rehabilitation

Metropolitan Labor

Studies & Investigations \$ 364,000

Owner Costs (Proj. Mgmt., Envir. Support) 482,000

Professional/Technical Services

Stantec Consulting Services Inc. 1,000,000

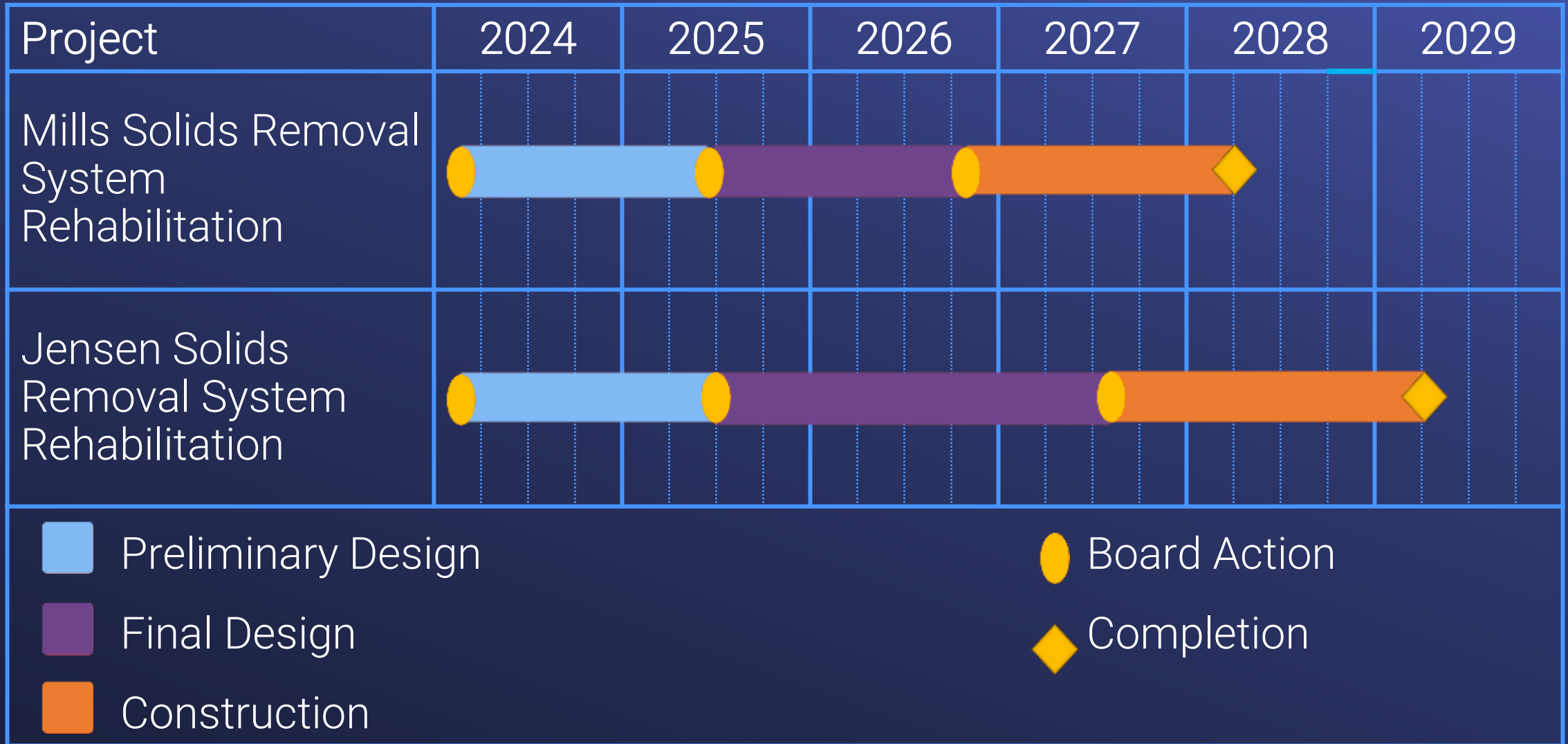
Value Engineering 160,000

Environmental Services 48,000

Remaining Budget 246,000

Total \$ 2,300,000

Project Schedule



Board Options

- Option #1

Authorize an agreement with Stantec Consulting Services Inc. in an amount not to exceed \$1 million for preliminary design to rehabilitate the sedimentation basins solids removal systems at the Joseph Jensen and Henry J. Mills Water Treatment Plants.

- Option #2

Do not proceed with the project at this time.

Staff Recommendation

- Option #1

